



Ministry for
Infrastructure, Transport
and Communications



National Frequency Plan

Edition 4.4

MCA/10/26/O/R.4

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Introduction

This fourth edition of the National Frequency Plan (hereinafter referred to as 'the Plan') is adopted and published in accordance with the provisions of the Electronic Communications (Regulation) Act (Cap. 399 of the Laws of Malta)¹.

The Plan contains a number of tables, which list the allocations made for radio frequency spectrum for Malta. These tables, which are based on the Radio Regulations of the International Telecommunication Union (ITU) (edition of 2008²), cover the frequency range 9 kilohertz (kHz) to 1000 gigahertz (GHz) and lists for each frequency range the types of radiocommunications services that are permitted and which applications are currently in use in Malta. Information is also given on possible future uses or change in use of particular frequency bands.

Besides the ITU Radio Regulations, the tables are also based on the European table of frequency allocations and utilizations - the ERC Report 025. The report is considered as a useful tool when considering and planning harmonization within the context of the European frequency spectrum.

The tables contained in this Plan are structured as follows:

Column 1

Frequency band

Values in this column denote the frequency band. Units used in the header are in kHz (kilohertz), MHz (megahertz) and GHz (gigahertz).

Column 2

ITU allocations and footnotes (relevant to Malta)

This column shows the type of service allocated to the band on an international basis, together with some footnotes which are relevant to Malta. These allocations are defined in the ITU Radio Regulations and also in Annex 1 of this Plan.

Entries in *upper case* denote primary services. Entries in *lower case* denote secondary services (as defined in the Radio Regulations). The footnotes are the footnotes to the Table of Frequency Allocations in the Radio Regulations. Only footnotes relevant to Malta are included in this table. The full text of these footnotes appears in Annex 2.

Column 3

National allocations

This column shows the type of service allocated to the band in Malta. The footnotes under this column are national footnotes. Their full text appears in Annex 3.

Column 4

Major utilisation

This column indicates the current national usage of the frequency band.

Column 5

Notes

This column contains additional information, such as relevant documentation, limitations / restrictions, etc. It also establishes the technical specifications relevant to the frequency band.

¹ <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8866&l=1>.

² The 2008 edition of the Radio Regulations was updated by the World Radiocommunication Conference held in 2007 (WRC-07).

Introduction

The National Frequency Plan will be updated regularly. The allocations are not static and will change in time as new radio systems are introduced and old ones phased out. Changes will also be made to reflect agreements on spectrum utilization at international level or a consequence of national decisions made to meet specific national requirements.

Reference to a European Directive or Decision, as the case may be, in any of the tables of the Plan or its annexes, indicates full implementation of that specific Directive or Decision. Therefore, by virtue of this Plan, all the provisions contained in the referred European instruments are considered to be adopted. In this context, where European legislation is amended, the Plan only contains a reference to the original legislation. The details of the amending legal instrument are only contained in Annex 4 of the Plan.

The Malta Communications Authority (MCA) is the body responsible for spectrum management in Malta. Accordingly, unless otherwise indicated in national footnotes (Annex 3 of the Plan), or stipulated otherwise in law, management of the radio frequency spectrum contained in this radio frequency plan, is to be carried out by the said Authority.

Part A

The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
Below 9	(Not allocated) 5.53 5.54	(Not allocated)		
9 – 14	RADIONAVIGATION	RADIONAVIGATION MLT01	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & 2007/131/EC as amended.
14 – 19.95	FIXED MARITIME MOBILE 5.57 5.56	FIXED MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
19.95 – 20.05	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
20.05 – 70	FIXED MARITIME MOBILE 5.57 5.56	FIXED MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
70 – 72	RADIONAVIGATION 5.60	RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
72 – 84	FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.60 5.56	FIXED MARITIME MOBILE RADIONAVIGATION	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
84 – 86	RADIONAVIGATION 5.60	RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
86 – 90	FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.56	FIXED MARITIME MOBILE RADIONAVIGATION	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
90 – 110	RADIONAVIGATION 5.62 Fixed 5.64	RADIONAVIGATION Fixed	SRDs (details in Annex 5) LORAN-C system	EC Decision 2006/771/EC as amended.
110 – 112	FIXED MARITIME MOBILE RADIONAVIGATION 5.64	FIXED MARITIME MOBILE RADIONAVIGATION	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
112 – 115	RADIONAVIGATION 5.60	RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
115 – 117.6	RADIONAVIGATION 5.60 Fixed Maritime Mobile 5.64	RADIONAVIGATION Fixed Maritime Mobile	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
117.6 – 126	FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64	FIXED MARITIME MOBILE RADIONAVIGATION	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
126 – 129	RADIONAVIGATION 5.60	RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
129 – 130	FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64	FIXED MARITIME MOBILE RADIONAVIGATION	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
130 – 135.7	FIXED MARITIME MOBILE 5.64	FIXED MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
135.7 – 137.8	FIXED MARITIME MOBILE Amateur 5.67A 5.64	FIXED MARITIME MOBILE Amateur	SRDs (details in Annex 5) Maritime applications Amateur applications	EC Decision 2006/771/EC as amended.
137.8 – 148.5	FIXED MARITIME MOBILE 5.64	FIXED MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
148.5 – 255	BROADCASTING	BROADCASTING MLT02	Broadcasting SRDs (details in Annex 5)	ITU Geneva 1975 plan. EC Decision 2006/771/EC as amended.
255 – 283.5	BROADCASTING AERONAUTICAL RADIONAVIGATION	BROADCASTING AERONAUTICAL RADIONAVIGATION MLT02	Broadcasting SRDs (details in Annex 5)	ITU Geneva 1975 plan. EC Decision 2006/771/EC as amended.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
283.5 – 315	AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 5.73 5.74	AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons)	Radiobeacons SRDs (details in Annex 5)	ITU Geneva 1985 plan. EC Decision 2006/771/EC as amended.
315 – 325	AERONAUTICAL RADIONAVIGATION Maritime radionavigation (radiobeacons) 5.73	AERONAUTICAL RADIONAVIGATION Maritime radionavigation (radiobeacons)	Radiobeacons SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
325 – 405	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Aeronautical radiobeacons SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
405 – 415	RADIONAVIGATION 5.76	RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
415 – 435	AERONAUTICAL RADIONAVIGATION MARITIME MOBILE 5.79	AERONAUTICAL RADIONAVIGATION MARITIME MOBILE	SRDs (details in Annex 5) Aeronautical radiobeacons Maritime applications	EC Decision 2006/771/EC as amended. ITU Geneva 1985 plan. ITU Geneva 1985 plan.
435 – 472	MARITIME MOBILE 5.79 5.79A Aeronautical Radionavigation 5.82	MARITIME MOBILE Aeronautical Radionavigation	SRDs (details in Annex 5) Maritime applications NAVTEX	EC Decision 2006/771/EC as amended. ITU Geneva 1985 plan. 490 kHz (national language NAVTEX channel).
472 - 479	MARITIME MOBILE 5.79 5.79A Amateur Aeronautical Radionavigation 5.82	MARITIME MOBILE Amateur Aeronautical Radionavigation MLT03	SRDs (details in Annex 5) Maritime applications NAVTEX	EC Decision 2006/771/EC as amended. ITU Geneva 1985 plan. The equivalent isotropically radiated power of any amateur station shall not exceed 1 Watt.
479 – 495	MARITIME MOBILE 5.79 5.79A Aeronautical Radionavigation 5.82	MARITIME MOBILE Aeronautical Radionavigation	SRDs (details in Annex 5) Maritime applications NAVTEX	EC Decision 2006/771/EC as amended. ITU Geneva 1985 plan. 490 kHz (national language NAVTEX channel).
495 – 505	MOBILE 5.82A 5.82B	MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended. ITU RR Articles 31 and 52.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
505 – 526.5	MARITIME MOBILE 5.79 5.79A 5.84 AERONAUTICAL RADIONAVIGATION	MARITIME MOBILE AERONAUTICAL RADIONAVIGATION	SRDs (details in Annex 5) Maritime applications NAVTEX	EC Decision 2006/771/EC as amended. ITU Geneva 1985 plan. 518 kHz (International NAVTEX channel). ITU RR Articles 31 and 52.
526.5 – 1606.5	BROADCASTING	BROADCASTING MLT02	Broadcasting SRDs (details in Annex 5)	ITU Geneva 1975 plan. EC Decision 2006/771/EC as amended.
1606.5 – 1625	FIXED MARITIME MOBILE 5.90 LAND MOBILE 5.92	FIXED MARITIME MOBILE LAND MOBILE Radiolocation	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended. ITU Geneva 1985 plan.
1625 – 1635	RADIOLOCATION	RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
1635 – 1800	FIXED MARITIME MOBILE 5.90 LAND MOBILE 5.92 5.96	FIXED MARITIME MOBILE LAND MOBILE	Maritime applications SRDs (details in Annex 5)	ITU Geneva 1985 plan. EC Decision 2006/771/EC as amended.
1800 – 1810	RADIOLOCATION	RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
1810 – 1850	AMATEUR 5.100	AMATEUR	Amateur applications SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
1850 – 2000	FIXED MOBILE except aeronautical mobile 5.92 5.96 5.103	FIXED MOBILE except aeronautical mobile Amateur	SRDs (details in Annex 5) Maritime applications Amateur applications	EC Decision 2006/771/EC as amended. The mean power of any amateur station shall not exceed 10 W.
2000 – 2025	FIXED MOBILE except aeronautical mobile (R) 5.92 5.103	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
2025 – 2045	FIXED MOBILE except aeronautical mobile (R) Meteorological Aids 5.104 5.92 5.103	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
2045 – 2160	FIXED MARITIME MOBILE LAND MOBILE 5.92	FIXED MARITIME MOBILE LAND MOBILE	Maritime applications SRDs (details in Annex 5)	ITU RR Article 52. ITU Geneva 1985 plan. EC Decision 2006/771/EC as amended.
2160 – 2170	RADIOLOCATION	RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
2170 – 2173.5	MARITIME MOBILE	MARITIME MOBILE	Maritime applications SRDs (details in Annex 5)	ITU Geneva 1985 plan. EC Decision 2006/771/EC as amended.
2173.5 – 2190.5	MOBILE (distress and calling) 5.108 5.109 5.110 5.111	MOBILE (distress and calling)	SRDs (details in Annex 5) Maritime GMDSS	EC Decision 2006/771/EC as amended. International distress and calling (2182 kHz). DSC distress and calling (2187.5 kHz). Telex distress traffic (2174.5 kHz).
2190.5 – 2194	MARITIME MOBILE	MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
2194 – 2300	FIXED MOBILE except aeronautical mobile (R) 5.92 5.103 5.112	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
2300 – 2498	FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113 5.103	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5) Fixed links Maritime applications	EC Decision 2006/771/EC as amended.
2498 – 2501	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
2501 – 2502	STANDARD FREQUENCY AND TIME SIGNAL Space Research	STANDARD FREQUENCY AND TIME SIGNAL Space Research	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
2502 – 2625	FIXED MOBILE except aeronautical mobile (R) 5.92 5.103 5.114	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
2625 – 2650	MARITIME MOBILE MARITIME RADIONAVIGATION 5.92	MARITIME MOBILE MARITIME RADIONAVIGATION	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
2650 – 2850	FIXED MOBILE except aeronautical mobile (R) 5.92 5.103	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
2850 – 3025	AERONAUTICAL MOBILE (R) 5.111 5.115	AERONAUTICAL MOBILE (R)	SRDs (details in Annex 5) Aeronautical applications	EC Decision 2006/771/EC as amended. ITU RR Appendix 27. Telephony distress traffic and calling by rescue centres (3023 kHz).
3025 – 3155	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 26. EC Decision 2006/771/EC as amended.
3155 – 3200	FIXED MOBILE except aeronautical mobile (R) 5.116 5.117	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
3200 – 3230	FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113 5.116	MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
3230 – 3400	FIXED MOBILE except aeronautical mobile BROADCASTING 5.113 5.116	FIXED MOBILE except aeronautical mobile	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended.
3400 – 3500	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 27. EC Decision 2006/771/EC as amended.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
3500 – 3800	AMATEUR FIXED MOBILE except aeronautical mobile 5.92	AMATEUR FIXED MOBILE except aeronautical mobile	Amateur applications Maritime applications SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
3800 – 3900	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	Aeronautical applications SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
3900 – 3950	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 26. EC Decision 2006/771/EC as amended.
3950 – 4000	FIXED BROADCASTING	FIXED BROADCASTING	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
4000 – 4063	FIXED MARITIME MOBILE 5.127	FIXED MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended. ITU RR Appendix 17. ITU RR Appendix 25.
4063 – 4438	MARITIME MOBILE 5.79A 5.109 5.110 5.130 5.131 5.132 5.128	MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended. ITU RR Articles 31 and 52. ITU RR Appendix 17. ITU RR Appendix 25. DSC calling (4208, 4208.5, 4209, 4219.5, 4220, 4220.5 kHz). DSC distress traffic (4207.5 kHz). MSI (4210 kHz). Meteorological and navigation warnings (4209.5 kHz). Telephony distress traffic and calling by rescue centers (4125 kHz). Telex distress traffic (4177.5 kHz).
4438 – 4650	FIXED MOBILE except aeronautical mobile (R)	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
4650 – 4700	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 27. EC Decision 2006/771/EC as amended.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
4700 – 4750	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 26. EC Decision 2006/771/EC as amended.
4750 – 4850	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE BROADCASTING 5.113	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	Aeronautical applications SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
4850 – 4995	FIXED LAND MOBILE BROADCASTING 5.113	FIXED LAND MOBILE	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
4995 - 5003	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5003 – 5005	STANDARD FREQUENCY AND TIME SIGNAL Space research	STANDARD FREQUENCY AND TIME SIGNAL Space research	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5005 – 5060	FIXED BROADCASTING 5.113	FIXED	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5060 – 5250	FIXED MOBILE except aeronautical mobile	FIXED MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5250 – 5450	FIXED MOBILE except aeronautical mobile	FIXED MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5450 – 5480	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	SRDs (details in Annex 5) Aeronautical applications	EC Decision 2006/771/EC as amended.
5480 – 5680	AERONAUTICAL MOBILE (R) 5.111 5.115	AERONAUTICAL MOBILE (R)	SRDs (details in Annex 5) Aeronautical applications	EC Decision 2006/771/EC as amended. ITU RR Article 31. ITU RR Appendix 27. Telephony distress traffic and calling by rescue centers (5680 kHz).
5680 – 5730	AERONAUTICAL MOBILE (OR) 5.111 5.115	AERONAUTICAL MOBILE (OR)	SRDs (details in Annex 5) Aeronautical applications	EC Decision 2006/771/EC as amended. ITU RR Article 31. ITU RR Appendix 26. Telephony distress traffic and calling by rescue centers (5680 kHz)

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
5730 – 5900	FIXED LAND MOBILE	FIXED LAND MOBILE	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5900 – 5950	BROADCASTING 5.134 5.136	BROADCASTING MLT02	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ITU RR Article 12.
5950 – 6200	BROADCASTING	BROADCASTING MLT02	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ITU RR Article 12.
6200 – 6525	MARITIME MOBILE 5.109 5.110 5.130 5.132 5.137	MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decision 2006/771/EC as amended. ITU RR Appendix 17. ITU RR Appendix 25. ITU RR Articles 31 and 52. DSC calling (6312.5, 6313, 6313.5, 6331, 6331.5, 6332 kHz). DSC distress traffic (6312 kHz). MSI (6314 kHz). Telephony distress traffic and calling by rescue centers (6215 kHz). Telex distress traffic (6268 kHz).
6525 – 6685	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 27. EC Decision 2006/771/EC as amended.
6685 – 6765	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 26. EC Decision 2006/771/EC as amended.
6765 – 7000	FIXED MOBILE except aeronautical mobile (R) 5.138 5.138A	FIXED Land mobile	Fixed links SRDs (details in Annex 5) ISM applications (6765-6795 kHz)	EC Decisions 2006/771/EC as amended.
7000 – 7100	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE	Amateur applications SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
7100 – 7200	AMATEUR 5.141C	AMATEUR	Amateur applications SRDs (details in Annex 5) Shortwave broadcasting (reception only)	EC Decisions 2006/771/EC as amended.
7200 – 7300	BROADCASTING	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
7300 – 7400	BROADCASTING 5.134 5.143 5.143B	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
7400 – 7450	BROADCASTING 5.143B	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
7450 – 8100	FIXED MOBILE except aeronautical mobile (R) 5.143E	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
8100 – 8195	FIXED MARITIME MOBILE	FIXED MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decisions 2006/771/EC as amended. ITU RR Appendix 17.
8195 – 8815	MARITIME MOBILE 5.109 5.110 5.132 5.145 5.111	MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decisions 2006/771/EC as amended. ITU RR Appendix 17. ITU RR Appendix 25. DSC calling (8415, 8415.5, 8416, 8436.5, 8437, 8437.5 kHz). DSC distress traffic (8414.5 kHz). Survival craft stations (8364 kHz). MSI (8416.5 kHz). Telephony distress traffic and calling by rescue centers (8291 kHz). Telex distress traffic (8376.5 kHz).

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
8815 – 8965	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 27. EC Decisions 2006/771/EC as amended.
8965 – 9040	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 26. EC Decisions 2006/771/EC as amended.
9040 – 9400	FIXED	FIXED	Fixed links SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
9400 – 9500	BROADCASTING 5.134 5.146	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
9500 – 9900	BROADCASTING 5.147	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
9900 – 9995	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
9995 – 10003	STANDARD FREQUENCY AND TIME SIGNAL 5.111	STANDARD FREQUENCY AND TIME SIGNAL	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
10003 – 10005	STANDARD FREQUENCY AND TIME SIGNAL Space Research 5.111	STANDARD FREQUENCY AND TIME SIGNAL Space Research	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
10005 – 10100	AERONAUTICAL MOBILE (R) 5.111	AERONAUTICAL MOBILE (R)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 27. EC Decisions 2006/771/EC as amended.
10100 – 10150	FIXED Amateur	FIXED Amateur	SRDs (details in Annex 5) Amateur applications	EC Decisions 2006/771/EC as amended.
10150 – 11175	FIXED MOBILE except aeronautical mobile (R)	FIXED MOBILE except aeronautical mobile (R)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
11175 – 11275	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 26. EC Decisions 2006/771/EC as amended.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
11275 – 11400	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 27. EC Decisions 2006/771/EC as amended.
11400 – 11600	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
11600 – 11650	BROADCASTING 5.134 5.146	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
11650 – 12050	BROADCASTING 5.147	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
12050 – 12100	BROADCASTING 5.134 5.146	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
12100 – 12230	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
12230 – 13200	MARITIME MOBILE 5.109 5.110 5.132 5.145	MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decisions 2006/771/EC as amended & ERC Rec 70-03. ITU RR Appendix 17. ITU RR Appendix 25. DSC calling (12577.5, 12578, 12578.5, 12657, 12657.5, 12658 kHz). DSC distress traffic (12577 kHz). MSI (12579 kHz). Telephony distress traffic and calling by rescue centers (12290 kHz). Telex distress traffic (12520 kHz).
13200 – 13260	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 26. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
13260 – 13360	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 27. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
13360 – 13410	FIXED RADIO ASTRONOMY 5.149	FIXED RADIO ASTRONOMY	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
13410 – 13570	FIXED Mobile except aeronautical mobile (R) 5.150	FIXED Mobile except aeronautical mobile (R)	SRDs (details in Annex 5) ISM applications (13553-13567 kHz)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
13570 – 13600	BROADCASTING 5.134 5.151	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
13600 – 13800	BROADCASTING	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
13800 – 13870	BROADCASTING 5.134 5.151	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
13870 – 14000	FIXED Mobile except aeronautical mobile (R)	FIXED Mobile except aeronautical mobile (R)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC & ERC Rec 70-03.
14000 – 14250	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE	Amateur applications SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
14250 – 14350	AMATEUR	AMATEUR	Amateur applications SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
14350 – 14990	FIXED Mobile except aeronautical mobile (R)	FIXED Mobile except aeronautical mobile (R)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
14990 – 15005	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 5.111	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
15005 – 15010	STANDARD FREQUENCY AND TIME SIGNAL Space Research	STANDARD FREQUENCY AND TIME SIGNAL Space Research	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
15010 – 15100	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 26. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
15100 – 15600	BROADCASTING	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
15600 – 15800	BROADCASTING 5.134 5.146	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
15800 – 16360	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
16360 – 17410	MARITIME MOBILE 5.109 5.110 5.132 5.145	MARITIME MOBILE	SRDs (details in Annex 5) Maritime applications	EC Decisions 2006/771/EC as amended & ERC Rec 70-03. ITU RR Appendix 17. ITU RR Appendix 25. DSC calling (16805, 16805.5, 16806, 16903, 16903.5, 16904 kHz). DSC distress traffic (16804.5 kHz). MSI (16806.5 kHz). Telephony distress traffic and calling by rescue centers (16420 kHz). Telex distress traffic (16695 kHz).
17410 – 17480	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
17480 – 17550	BROADCASTING 5.134 5.146	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
17550 – 17900	BROADCASTING	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
17900 – 17970	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 27. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
17970 – 18030	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 26. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
18030 – 18052	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
18052 – 18068	FIXED Space Research	FIXED Space Research	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
18068 – 18168	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE	Amateur applications SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
18168 – 18780	FIXED Mobile except aeronautical mobile	FIXED Mobile except aeronautical mobile	SRDs (details in Annex 5) Maritime applications	EC Decisions 2006/771/EC as amended & ERC Rec 70-03. DSC calling (18898.5, 18899, 18899.5 kHz).
18780 – 18900	MARITIME MOBILE	MARITIME MOBILE	Maritime applications SRDs (details in Annex 5)	ITU RR Appendix 17. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
18900 – 19020	BROADCASTING 5.134 5.146	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
19020 – 19680	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
19680 – 19800	MARITIME MOBILE 5.132	MARITIME MOBILE	Maritime applications SRDs (details in Annex 5)	ITU RR Appendix 17. ITU RR Appendix 25. DSC calling (19703.5, 19704, 19704.5 kHz). MSI (19680.5 kHz). EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
19800 – 19990	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
19990 – 19995	STANDARD FREQUENCY AND TIME SIGNAL Space Research 5.111	STANDARD FREQUENCY AND TIME SIGNAL Space Research	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
19995 – 20010	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz) 5.111	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
20010 – 21000	FIXED Mobile	FIXED Mobile	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
21000 – 21450	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE	Amateur applications SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
21450 – 21850	BROADCASTING	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
21850 – 21870	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
21870 – 21924	FIXED 5.155B	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
21924 – 22000	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical applications SRDs (details in Annex 5)	ITU RR Appendix 27. EC Decisions 2006/771/EC as amended.
22000 – 22855	MARITIME MOBILE 5.132	MARITIME MOBILE	Maritime applications SRDs (details in Annex 5)	ITU RR Appendix 17. ITU RR Appendix 25. DSC calling (22374.5, 22375, 22375.5, 22444, 22444.5, 22445 kHz). MSI (22376 kHz). EC Decisions 2006/771/EC as amended.
22855 – 23000	FIXED	FIXED	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
23000 – 23200	FIXED Mobile except aeronautical mobile (R)	FIXED Mobile except aeronautical mobile (R)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
23200 – 23350	FIXED 5.156A AERONAUTICAL MOBILE (OR)	FIXED AERONAUTICAL MOBILE (OR)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.

TABLE OF FREQUENCY ALLOCATIONS FOR MALTA

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
23350 – 24000	FIXED MOBILE except aeronautical mobile 5.157	FIXED MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
24000 – 24890	FIXED LAND MOBILE	FIXED LAND MOBILE	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
24890 – 24990	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE	Amateur applications SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
24990 – 25005	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
25005 – 25010	STANDARD FREQUENCY AND TIME SIGNAL Space Research	STANDARD FREQUENCY AND TIME SIGNAL Space Research	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
25010 – 25070	FIXED MOBILE except aeronautical mobile	FIXED MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
25070 – 25210	MARITIME MOBILE	MARITIME MOBILE	Maritime applications SRDs (details in Annex 5)	ITU RR Appendix 17. DSC calling (25208.5, 25209, 25209.5 kHz). EC Decisions 2006/771/EC as amended.
25210 – 25550	FIXED MOBILE except aeronautical mobile	FIXED MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
25550 – 25670	RADIO ASTRONOMY 5.149	RADIO ASTRONOMY	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
25670 – 26100	BROADCASTING	BROADCASTING MLT02	Shortwave broadcasting (reception only) SRDs (details in Annex 5)	ITU RR Article 12. EC Decisions 2006/771/EC as amended.
26100 – 26175	MARITIME MOBILE 5.132	MARITIME MOBILE	Maritime applications SRDs (details in Annex 5)	ITU RR Appendix 17. ITU RR Appendix 25. DSC calling (26121, 26121.5, 26122 kHz). MSI (26100.5 kHz). EC Decisions 2006/771/EC as amended.

Part A ~ The Radio Spectrum in kHz

9 kHz to 27 500 kHz

Frequency Band (kHz)	ITU Allocation and Footnotes (Relevant to Malta)	National Allocation	Major Utilisation	Notes
26175 – 27500	<p>FIXED MOBILE except aeronautical mobile</p> <p>5.150</p>	<p>FIXED MOBILE except aeronautical mobile</p>	<p>SRDs (details in Annex 5) CB radio (26960-27410 kHz) Paging (private, on-site, 26700-27500 kHz) Model control (surface, 26970-27240 kHz) ISM applications (26957-27283 kHz)</p>	<p>EC Decision 2006/771/EC as amended. ERC Dec (98)11, ERC Rec T/R 20-09.</p>

Part B

The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
27.5 – 28	METEREOLOGICAL AIDS FIXED MOBILE	METEREOLOGICAL AIDS FIXED MOBILE MLT01	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & 2007/131/EC as amended.
28 – 29.7	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE	Amateur applications SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
29.7 – 30.005	FIXED MOBILE	MOBILE	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended & ERC Rec 70-03.
30.005 – 30.01	SPACE OPERATION (satellite identification) FIXED MOBILE SPACE RESEARCH	MOBILE	SRDs (details in Annex 5)	ERC Rec 70-03
30.01 – 37.5	FIXED MOBILE	MOBILE	SRDs (details in Annex 5) Paging (private, on-site, 31.3-31.9 MHz)	EC Decisions 2006/771/EC as amended. ERC Rec 70-03 & ERC Dec (01)11.
37.5 – 38.25	FIXED MOBILE Radio astronomy 5.149	MOBILE Radio astronomy	SRDs (details in Annex 5)	ERC Rec 70-03
38.25 – 39.986	FIXED MOBILE	MOBILE	SRDs (details in Annex 5)	ERC Rec 70-03
39.986 – 40.02	FIXED MOBILE Space research	MOBILE Space research	SRDs (details in Annex 5)	ERC Rec 70-03
40.02 – 40.98	FIXED MOBILE 5.150	MOBILE	SRDs (details in Annex 5) ISM applications (40.66-40.7 MHz)	EC Decision 2006/771/EC as amended & ERC Rec 70-03.
40.98 – 41.015	FIXED MOBILE Space research	MOBILE Space research	Model control (flying, 40.995-41.205 MHz)	
41.015 – 44	FIXED MOBILE	MOBILE	Model control (flying, up to 41.205 MHz)	

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
44 – 47	FIXED MOBILE	MOBILE		
47 – 50	BROADCASTING 5.164	LAND MOBILE		On -site paging systems in the band 47-47.25 MHz.
50 – 52	BROADCASTING 5.164	LAND MOBILE Amateur	Amateur applications	
52 – 54	BROADCASTING 5.164	LAND MOBILE		ERC Rec T/R 25-08 (single frequency applications).
54 – 61	BROADCASTING 5.164	LAND MOBILE		ERC Rec T/R 25-08 (paired with 61-68 MHz).
61 – 68	BROADCASTING 5.164	LAND MOBILE		ERC Rec T/R 25-08 (paired with 54-61 MHz).
68 – 74.8	FIXED MOBILE except aeronautical mobile 5.149	MOBILE except aeronautical mobile	Mobile applications	Government services. ERC Rec T/R 25-08 (paired with 77.8-84.6 MHz).
74.8 – 75.2	AERONAUTICAL RADIONAVIGATION 5.180	AERONAUTICAL RADIONAVIGATION		
75.2 – 77.7	FIXED MOBILE except aeronautical mobile	MOBILE	Mobile applications	Government services. ERC Rec T/R 25-08 (paired with 85-87.5 MHz).
77.7 – 77.8	FIXED MOBILE except aeronautical mobile	MOBILE		ERC Rec T/R 25-08 (single frequency operation).
77.8 – 84.6	FIXED MOBILE except aeronautical mobile	MOBILE		Government services. ERC Rec T/R 25-08 (paired with 68-74.8 MHz).
84.6 - 85	FIXED MOBILE except aeronautical mobile	MOBILE		Government services. ERC Rec T/R 25-08 (single frequency operation).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
85 – 87.5	FIXED MOBILE except aeronautical mobile	MOBILE		ERC Rec T/R 25-08 (paired with 75.2-77.7 MHz).
87.5 – 100	BROADCASTING	BROADCASTING MLT02	Broadcasting (FM Sound) SRDs (details in Annex 5)	ITU Geneva 1984 Agreement. EC Decision 2006/771/EC as amended.
100 – 108	BROADCASTING	BROADCASTING MLT02	Broadcasting (FM Sound) SRDs (details in Annex 5)	ITU Geneva 1984 Agreement. EC Decision 2006/771/EC as amended.
108 – 117.975	AERONAUTICAL RADIONAVIGATION 5.197A	AERONAUTICAL RADIONAVIGATION	Radionavigation applications	ILS / Localiser (108-112 MHz) VOR (108-117.975 MHz)
117.975 – 121.45	AERONAUTICAL MOBILE (R) 5.111 5.200	AERONAUTICAL MOBILE (R)	Aeronautical applications	Aeronautical mobile communications for safety and regulatory of flights.
121.45 – 121.55	AERONAUTICAL MOBILE (R) 5.111 5.200	AERONAUTICAL MOBILE (R)	Aeronautical applications	Band only available for distress and safety. Aeronautical emergency frequency (121.5 MHz).
121.55 – 137	AERONAUTICAL MOBILE (R) 5.111 5.200	AERONAUTICAL MOBILE (R)	Aeronautical applications	Auxiliary frequency to emergency frequency 121.5 MHz (123.1 MHz). Aeronautical mobile communications for safety and regulatory of flights, airline business and airport mobile communications.
137 – 137.025	SPACE OPERATION (s-E) METEOROLOGICAL SATELLITE (s-E) MOBILE SATELLITE (s-E) 5.208A 5.208B 5.209 SPACE RESEARCH (s-E) Fixed Mobile except aeronautical mobile (R) 5.208	METEOROLOGICAL SATELLITE (s-E) MOBILE SATELLITE (s-E) MOBILE Space operation (s-E) Space research (s-E)		LEO satellites (ERC Dec (99)06). Mobile restricted to Aeronautical mobile (OR), including air sport.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
137.025 – 137.175	SPACE OPERATION (s-E) METEOROLOGICAL SATELLITE (s-E) SPACE RESEARCH (s-E) Fixed Mobile-satellite (s-E) 5.208A 5.208B 5.209 Mobile except aeronautical mobile (R) 5.208	METEOROLOGICAL SATELLITE (s-E) MOBILE SATELLITE (s-E) MOBILE Space operation (s-E) Space research (s-E)		LEO satellites (ERC Dec (99)06). Mobile restricted to Aeronautical mobile (OR), including air sport.
137.175 – 137.825	SPACE OPERATION (s-E) METEOROLOGICAL SATELLITE (s-E) MOBILE SATELLITE (s-E) 5.208A 5.208B 5.209 SPACE RESEARCH (s-E) Fixed Mobile except aeronautical mobile (R) 5.208	METEOROLOGICAL SATELLITE (s-E) MOBILE SATELLITE (s-E) MOBILE Space operation (s-E) Space research (s-E)	Meteorological satellite reception	LEO satellites (ERC Dec (99)06). Mobile restricted to Aeronautical mobile (OR), including air sport.
137.825 – 138	SPACE OPERATION (s-E) METEOROLOGICAL SATELLITE (s-E) SPACE RESEARCH (s-E) Fixed Mobile-satellite (s-E) 5.208A 5.208B 5.209 Mobile except aeronautical mobile (R) 5.208	METEOROLOGICAL SATELLITE (s-E) MOBILE Mobile-satellite (s-E) Space operation (s-E) Space research (s-E)		LEO satellites (ERC Dec (99)06). Mobile restricted to Aeronautical mobile (OR), including air sport.
138 – 143.6	AERONAUTICAL MOBILE (OR) 5.211 5.214	AERONAUTICAL MOBILE (OR) LAND MOBILE Space research (s-E)	SRDs (details in Annex 5) Aeronautical applications	ERC Rec 70-03.
143.6 – 143.65	AERONAUTICAL MOBILE (OR) SPACE RESEARCH (s-E) 5.211 5.214	AERONAUTICAL MOBILE (OR) LAND MOBILE SPACE RESEARCH (s-E)	Aeronautical applications	
143.65 – 144	AERONAUTICAL MOBILE (OR) 5.211 5.214	AERONAUTICAL MOBILE (OR) LAND MOBILE	Aeronautical applications	
144 – 146	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE	Amateur applications	

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
146 – 148	FIXED MOBILE except aeronautical mobile (R)	MOBILE	PMR (12.5 kHz channel spacing)	ERC Rec T/R 25-08.
148 – 149.9	FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (E-s) 5.209 5.218 5.219 5.221	MOBILE MOBILE-SATELLITE (E-s)	PMR (12.5 kHz channel spacing)	ERC Rec T/R 25-08. LEO satellites (ERC Dec (99)06).
149.9 – 150.05	MOBILE-SATELLITE (E-s) 5.209 5.224A RADIONAVIGATION-SATELLITE 5.224 B 5.220 5.222 5.223	MOBILE MOBILE-SATELLITE (E-s) RADIONAVIGATION-SATELLITE	PMR (12.5 kHz channel spacing)	ERC Rec T/R 25-08. LEO satellites (ERC Dec (99)06).
150.05 – 153	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	MOBILE except aeronautical mobile RADIO ASTRONOMY	PMR (12.5 kHz channel spacing)	ERC Rec T/R 25-08.
153 – 154	FIXED MOBILE except aeronautical mobile (R) Meteorological Aids	MOBILE except aeronautical mobile (R)	PMR (12.5 kHz channel spacing)	ERC Rec T/R 25-08.
154 – 156	FIXED MOBILE except aeronautical mobile (R) 5.226 5.227	MOBILE except aeronautical mobile (R)	PMR (12.5 kHz channel spacing)	ERC Rec T/R 25-08.
156 – 156.4875	FIXED MOBILE except aeronautical mobile (R) 5.226 5.227	MOBILE except aeronautical mobile (R)	Maritime applications	ITU RR Appendix 18.
156.4875 – 156.5375	MARITIME MOBILE (distress and calling via DSC) 5.111 5.226 5.227	MARITIME MOBILE (distress and calling via DSC)	Maritime applications	ITU RR Appendix 18. DSC distress, safety and calling (156.525 MHz).
156.5373 – 156.5625	MARITIME MOBILE (distress and calling via DSC) 5.111 5.226 5.227	MARITIME MOBILE (distress and calling via DSC) MOBILE except aeronautical mobile (R)	Maritime applications	ITU RR Appendix 18.
156.5625 – 156.7625	FIXED MOBILE except aeronautical mobile (R) 5.226	MOBILE except aeronautical mobile (R)	Maritime applications	ITU RR Appendix 18.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
156.7625 – 156.8375	MARITIME MOBILE (distress and calling) 5.111 5.226	MARITIME MOBILE (distress and calling)	Maritime applications	ITU RR Appendix 18. International distress, safety and calling (156.8 MHz).
156.8375 – 157.45	FIXED MOBILE except aeronautical mobile 5.226	MOBILE except aeronautical mobile	Maritime applications	ITU RR Appendix 18.
157.45 – 160.6	FIXED MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR (12.5 kHz channel spacing)	ERC Rec T/R 25-08 & ECC Dec (06)06.
160.6 – 160.975	FIXED MOBILE except aeronautical mobile 5.226	MOBILE except aeronautical mobile	Maritime applications	ITU RR Appendix 18.
160.975 – 161.475	FIXED MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR (12.5 kHz channel spacing) Maritime applications	ERC Rec T/R 25-08 & ECC Dec (06)06. Private maritime mobile channels.
161.475 – 162.05	FIXED MOBILE except aeronautical mobile 5.226 5.227A	MOBILE except aeronautical mobile	Maritime applications	ITU RR Appendix 18. AIS (ERC Dec (99)17 (161.975 and 162.025 MHz).
162.05 – 165.2	FIXED MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR (12.5 kHz channel spacing) Maritime applications	ERC Rec T/R 25-08 & ECC Dec (06)06. Private maritime mobile channels.
165.2 – 169.4	FIXED MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR (12.5 kHz channel spacing)	ERC Rec T/R 25-08 & ECC Dec (06)06.
169.4 – 169.825	FIXED MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decision 2005/928/EC as amended. The band 169.6125-169.8125 MHz is reserved for high power applications, 12.5 kHz channel spacing (EC Decision 2005/928/EC).
169.825 – 174	FIXED MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	SRDs (details in Annex 5) PMR (12.5 kHz channel spacing)	ERC Rec 70-03. ERC Rec T/R 25-08 & ECC Dec (06)06.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
174 – 223	BROADCASTING 5.235	BROADCASTING Land mobile MLT04 MLT05	Television Broadcasting (DTT) Sound Broadcasting (T-DAB)	ITU Geneva 2006 Agreement. Wiesbaden 1995 Special Arrangement as revised in Constanta 2007. Analogue TV switched off on 31 October 2011. Parts of this band are temporarily used by radio microphones.
223 – 230	BROADCASTING Fixed Mobile	BROADCASTING Land mobile MLT05	Sound Broadcasting (T-DAB)	ITU Geneva 2006 Agreement. Wiesbaden 1995 Special Arrangement as revised in Constanta 2007. Analogue TV switched off on 31 October 2011.
230 – 235	FIXED MOBILE	MOBILE	SAB / SAP applications	
235 – 240	FIXED MOBILE 5.111 5.254 5.256	MOBILE	SAB / SAP applications	
240 – 242.95	FIXED MOBILE 5.111 5.254 5.256	MOBILE		
242.95 – 243.05	FIXED MOBILE 5.111 5.254 5.256	AERONAUTICAL MOBILE MOBILE-SATELLITE (E-s)	EPIRBs	Band only available for distress and safety purposes.
243.05 – 267	FIXED MOBILE 5.111 5.254 5.256	MOBILE	Mobile applications	Government services.
267 – 272	FIXED MOBILE Space Operation (s-E) 5.254 5.257	FIXED MOBILE	Fixed links	

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
272 – 273	SPACE OPERATION (s-E) FIXED MOBILE 5.254	FIXED MOBILE	Fixed links	
273 – 312	FIXED MOBILE 5.254	FIXED MOBILE	Mobile applications Aeronautical UHF communications Fixed links	Government services.
312 – 315	FIXED MOBILE Mobile-Satellite (E-s) 5.254 5.255	MOBILE		
315 – 322	FIXED MOBILE 5.254	MOBILE	SAB / SAP applications	
322 – 328.6	FIXED MOBILE RADIO ASTRONOMY 5.149	FIXED MOBILE RADIO ASTRONOMY	Fixed links	
328.6 – 335.4	AERONAUTICAL RADIONAVIGATION 5.258	AERONAUTICAL RADIONAVIGATION	ILS / Glide path	
335.4 – 380	FIXED MOBILE 5.254	FIXED MOBILE	SAB / SAP applications Fixed links	

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
380 – 385	FIXED MOBILE 5.254	FIXED MOBILE	SAB / SAP applications (380.8-381.3 MHz, 381.6875-385 MHz) TETRA (Emergency services, 381.475-381.6 MHz)	No future assignments for SAB / SAP applications in this band. Paired with 391.475-391.6 MHz. ERC Dec (08)05, ERC Rec T/R 25-08 (paired with 391.475-391.6 MHz). DMO (Emergency services, ERC Dec (01)19, 380-380.15 MHz, paired with 390-390.15 MHz). AGA (Emergency services, ECC Dec (06)05, 384.8-385 MHz, paired with 394.8-395 MHz).
385 – 387	FIXED MOBILE 5.254	FIXED MOBILE	SAB / SAP applications	
387 – 390	FIXED MOBILE Mobile-Satellite (s-E) 5.208A 5.208B 5.254 5.255	FIXED MOBILE	SAB /SAP applications	

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
390 – 395	FIXED MOBILE 5.254	FIXED MOBILE	SAB / SAP applications (390-391.4 MHz, 391.7-395 MHz) TETRA (Emergency services, 391.475-391.6 MHz)	No future assignments for SAB / SAP applications in this band. Paired with 381.475-381.6 MHz. ERC Dec (08)05, ERC Rec T/R 25-08 (paired with 381.475-381.6 MHz). DMO (Emergency services, ERC Dec (01)19, 390-390.15 MHz, paired with 380-380.15 MHz). AGA (Emergency services, ECC Dec (06)05, 394.8-395 MHz, paired with 384.8-385 MHz).
395 – 399.9	FIXED MOBILE 5.254	FIXED MOBILE	SAB/ SAP applications Fixed links	
399.9 – 400.05	MOBILE-SATELLITE (E-s) 5.209 5.224A RADIONAVIGATION-SATELLITE 5.222 5.224B 5.260 5.220	MOBILE-SATELLITE (E-s) RADIONAVIGATION-SATELLITE		
400.05 – 400.15	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) 5.261	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)		
400.15 – 401	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (s-E) MOBILE-SATELLITE (s-E) 5.208A 5.208B 5.209 SPACE RESEARCH (s-E) 5.263 Space operation (s-E) 5.264	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (s-E) MOBILE-SATELLITE (s-E) SPACE RESEARCH (s-E) SPACE OPERATION (s-E)		LEO satellites (ERC Dec (99)06).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
401 – 402	METEOROLOGICAL AIDS SPACE OPERATION (s-E) EARTH EXPLORATION-SATELLITE (E-s) METEOROLOGICAL-SATELLITE (E-s) Fixed Mobile except aeronautical mobile	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (E-s) METEOROLOGICAL-SATELLITE (E-s)	SRDs (details in Annex 5)	EC Decisions 2006/771/EC as amended.
402 – 403	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (E-s) METEOROLOGICAL-SATELLITE (E-s) Fixed Mobile except aeronautical mobile	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (E-s) METEOROLOGICAL-SATELLITE (E-s)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
403 – 406	METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile	METEOROLOGICAL AIDS	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
406 – 406.1	MOBILE-SATELLITE (E-s) 5.266 5.267	MOBILE-SATELLITE (E-s)	Sat-EPIRBs (Emergency beacons)	Band only available for distress and safety purposes
406.1 – 410	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	LAND MOBILE RADIO ASTRONOMY	PMR (12.5 kHz channel spacing)	ERC Rec T/R 25-08. ECC Dec (06)06.
410 – 420	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (s-s) 5.268	MOBILE except aeronautical mobile	PMR (12.5 kHz channel spacing) TETRA	ERC Rec T/R 25-08. ECC Dec (06)06. ERC Dec (96)04.
420 – 430	FIXED MOBILE except aeronautical mobile Radiolocation	MOBILE except aeronautical mobile	PMR (12.5 kHz channel spacing) TETRA	ERC Rec T/R 25-08. ECC Dec (06)06. ERC Dec (96)04.
430 – 432	AMATEUR RADIOLOCATION 5.276	AMATEUR RADIOLOCATION	Amateur applications	
432 – 433.05	AMATEUR RADIOLOCATION Earth exploration-satellite (active) 5.279A 5.276	AMATEUR RADIOLOCATION Earth exploration-satellite (active)	Amateur applications	

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
433.05 – 434.79	AMATEUR RADIOLOCATION Earth exploration-satellite (active) 5.279A 5.138 5.276	AMATEUR RADIOLOCATION Earth exploration-satellite (active) Land Mobile	Amateur applications SRDs (details in Annex 5) ISM applications	EC Decision 2006/771/EC as amended.
434.79 – 438	AMATEUR RADIOLOCATION Earth exploration-satellite (active) 5.279A 5.276	AMATEUR RADIOLOCATION Earth exploration-satellite (active)	Amateur applications	
438 – 440	AMATEUR RADIOLOCATION 5.276	AMATEUR RADIOLOCATION	Amateur applications	
440 – 450	FIXED MOBILE except aeronautical mobile Radiolocation 5.286	FIXED MOBILE except aeronautical mobile	PMR 446 Links (440.22-442 MHz)	Analogue PMR 446 in the band 446-446.1 MHz (ERC Dec (98)25) & digital PMR 446 in the band 446.1-446.2 MHz (ECC Dec (05)12). ERC Rec T/R 25-08. 443-444 MHz reserved for narrow band PMR/PAMR single frequency operation (ECC Dec (06)06).
450 – 455	FIXED MOBILE 5.286AA 5.209 5.286 5.286A	FIXED MOBILE	PMR (12.5 kHz channel spacing) Links (450.22-451 MHz, 451.37-452 MHz) Paging (private, on-site, 451.23-451.27 MHz)	ERC Rec T/R 25-08. 452-454 MHz reserved for narrow band PMR/PAMR duplex frequency operation (paired with 462-464 MHz, ECC Dec (06)06).
455 – 456	FIXED MOBILE 5.286AA 5.209 5.286A	MOBILE		ERC Rec T/R 25-08.
456 – 459	FIXED MOBILE 5.286AA 5.287	MOBILE	On-board ship communications (457.525-457.575 MHz) Telemetry (457.59375-458.44375 MHz)	ERC Rec T/R 32-02.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
459 – 460	FIXED MOBILE 5.286AA 5.209 5.286A	MOBILE	Paging (private, on-site, 459-459.2 MHz)	ERC Rec T/R 25-08.
460 – 470	FIXED MOBILE 5.286AA Meteorological-satellite (s-E) 5.287 5.289	MOBILE	PMR (12.5 kHz channel spacing) On-board ship communications (457.525-457.575 MHz) Telemetry (463.18125-463.23125 MHz) Paging (private, on-site, 465.2375-465.2875 MHz)	ERC Rec T/R 25-08. ERC Rec T/R 32-02. 462-464 MHz reserved for narrow band PMR/PAMR duplex frequency operation (paired with 452-454 MHz, ECC Dec (06)06)
470 – 608	BROADCASTING 5.296	BROADCASTING Mobile MLT05	Television broadcasting (DTT)	ITU Geneva 2006 plan. Analogue TV switched off on 31 October 2011. Mobile applications restricted to radio microphones on a temporary basis.
608 – 614	BROADCASTING 5.149 5.296 5.306	BROADCASTING Mobile MLT05	Television broadcasting (DTT)	ITU Geneva 2006 plan. Analogue TV switched off on 31 October 2011. Mobile applications restricted to radio microphones on a temporary basis.
614 – 790	BROADCASTING 5.296 5.311A	BROADCASTING Mobile MLT05	Television broadcasting (DTT)	ITU Geneva 2006 plan. Analogue TV switch edoff on 31 October 2011. Mobile applications restricted to radio microphones on a temporary basis.
790 – 862	FIXED BROADCASTING MOBILE except aeronautical mobile 5.316B 5.317A 5.316 5.316A	BROADCASTING Mobile MLT04 MLT05	Television broadcasting (DTT) SRDs (details in Annex 5)	ITU Geneva 2006 plan. Analogue TV switched off on 31 October 2011. Mobile applications restricted to SRDs (ERC Rec 70-03).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
862 – 870	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING	MOBILE	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended, EC Decision 2006/804/EC & ERC Rec 70-03.
870 – 876	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING	MOBILE		Under consideration for digital land mobile systems (paired with 915-921 MHz, ERC Dec (96)04 & ECC Dec (04)06).
876 – 880	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING	MOBILE		
880 – 890	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING	MOBILE	TRA-ECS MCV services	Terrestrial radio applications capable of providing electronic communications services capable to coexist with GSM as per EC Directive 87/372/EC as amended by EC 2009/114/EC, & EC Decision 2009/766/EC as amended by 2011/251/EU. EC Decision 2010/166/EU.
890 – 915	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING Radiolocation	MOBILE	TRA-ECS MCV services	Terrestrial radio applications capable of providing electronic communications services capable to coexist with GSM as per EC Directive 87/372/EC as amended by EC 2009/114/EC, & EC Decision 2009/766/EC as amended by 2011/251/EU. EC Decision 2010/166/EU.
915 – 921	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING Radiolocation	MOBILE		Under consideration for digital land mobile systems (paired with 870-876 MHz, ERC Dec (96)04 & ECC Dec (04)06).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
921 – 925	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING Radiolocation	MOBILE		
925 – 935	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING Radiolocation	MOBILE	TRA-ECS MCV services	Terrestrial radio applications capable of providing electronic communications services capable to coexist with GSM as per EC Directive 87/372/EC as amended by EC 2009/114/EC, & EC Decision 2009/766/EC as amended by 2011/251/EU. EC Decision 2010/166/EU.
935 – 942	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING Radiolocation	MOBILE	TRA-ECS MCV services	Terrestrial radio applications capable of providing electronic communications services capable to coexist with GSM as per EC Directive 87/372/EC as amended by EC 2009/114/EC, & EC Decision 2009/766/EC as amended by 2011/251/EU. EC Decision 2010/166/EU.
942 – 960	FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING	MOBILE	TRA-ECS MCV services	Terrestrial radio applications capable of providing electronic communications services capable to coexist with GSM as per EC Directive 87/372/EC as amended by EC 2009/114/EC, & EC Decision 2009/766/EC as amended by 2011/251/EU. EC Decision 2010/166/EU.
960 – 1164	AERONAUTICAL RADIONAVIGATION 5.328 AERONAUTICAL MOBILE (R) 5.327A	AERONAUTICAL RADIONAVIGATION AERONAUTICAL MOBILE (R)	Aeronautical radionavigation applications	Flight safety, navigation and information distribution systems (DME, JTIDS, TACAN, SSR, MIDS).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
1164 – 1215	AERONAUTICAL RADIONAVIGATION 5.328 RADIONAVIGATION-SATELLITE (s-E) (s-s) 5.328B 5.328A	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (s-E) (s-s)	Aeronautical radionavigation applications. Radionavigation applications.	Flight safety, navigation and information distribution systems (DME, JTIDS, TACAN, SSR, MIDS). Satellite navigation (Galileo (1164-1214 MHz) & GLONASS (1190.3-1213.8 MHz)).
1215 – 1240	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E) (s-s) 5.328B 5.329 5.329A SPACE RESEARCH (active) 5.332	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E) (s-s) SPACE RESEARCH (active)	Radiolocation & radionavigation applications	Radar and navigation systems and active sensors. Satellite navigation (GLONASS (1237.8-1253.8 MHz & GPS (1215.6-1239.6 MHz)).
1240 – 1260	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E) (s-s) 5.328B 5.329 5.329A SPACE RESEARCH (active) Amateur 5.332	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E) (s-s) SPACE RESEARCH (active) Amateur	Radiolocation & radionavigation applications Amateur applications	Radar and navigation systems and active sensors. Satellite navigation (GLONASS (1237.8-1253.8 MHz)).
1260 - 1270	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E) (s-s) 5.328B 5.329 5.329A SPACE RESEARCH (active) Amateur 5.282 5.335A	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E) (s-s) SPACE RESEARCH (active) Amateur Amateur-satellite	Radiolocation & radionavigation applications Amateur applications	Radar and navigation systems and active sensors. Satellite navigation (Galileo (1260-1300 MHz)).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
1270 - 1300	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E) (s-s) 5.328B 5.329 5.329A SPACE RESEARCH (active) Amateur 5.335A	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E) (s-s) SPACE RESEARCH (active) Amateur	Radiolocation & radionavigation applications Amateur applications	Radar and navigation systems and active sensors. Wind profiler radar (1270-1295 MHz). Satellite navigation (Galileo (1260-1300 MHz)).
1300 – 1350	AERONAUTICAL RADIONAVIGATION 5.337 RADIOLOCATION RADIONAVIGATION-SATELLITE (E-s) 5.149 5.337A	AERONAUTICAL RADIONAVIGATION RADIOLOCATION RADIONAVIGATION-SATELLITE (E-s)	Radiolocation & radionavigation applications	Radar, navigation systems and satellite navigation.
1350 – 1400	FIXED MOBILE RADIOLOCATION 5.149 5.338A 5.339	FIXED MOBILE RADIOLOCATION	Mobile applications (tactical radio relay)	1350-1375 MHz and 1375-1400 MHz reserved for low capacity fixed links (paired with 1492-1517 MHz and 1427-1452 MHz, ERC Rec T/R 13-01). ECC Dec (11)01.
1400 – 1427	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited, ECC Dec (11)01.
1427 – 1429	SPACE OPERATIONS (E-s) FIXED MOBILE except aeronautical mobile 5.338A 5.341	SPACE OPERATIONS (E-s) FIXED MOBILE except aeronautical mobile	Fixed links	1427-1452 MHz reserved for low capacity fixed links (paired with 1375-1400 MHz, ERC Rec T/R 13-01). ECC Dec (11)01.
1429 – 1452	FIXED MOBILE except aeronautical mobile 5.338A 5.341	FIXED MOBILE except aeronautical mobile		1427-1452 MHz reserved for low capacity fixed links (paired with 1375-1400 MHz, ERC Rec T/R 13-01).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
1452 – 1492	FIXED MOBILE except aeronautical mobile BROADCASTING 5.345 BROADCASTING-SATELLITE 5.208B 5.345 5.341	BROADCASTING BROADCASTING-SATELLITE	T-DAB / T-DMB	Maastricht 2002 special arrangement, as revised in Constanta, 2007. S-DAB (1479.5-1492 MHz, ECC Dec (03)02). No future assignments shall be considered in this band.
1492 – 1518	FIXED MOBILE except aeronautical mobile 5.341	FIXED MOBILE except aeronautical mobile	Fixed links	1492-1517 MHz reserved for low capacity fixed links (paired with 1350-1375 MHz, ERC Rec T/R 13-01).
1518 – 1525	FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (s-E) 5.348 5.348A 5.351A 5.341	MOBILE except aeronautical mobile MOBILE-SATELLITE (s-E)		IMT (satellite component), ECC Dec (04)09.
1525 – 1530	SPACE OPERATION (s-E) FIXED MOBILE-SATELLITE (s-E) 5.208B 5.351A Earth exploration-satellite Mobile except aeronautical mobile 5.341 5.351 5.352A 5.354	SPACE OPERATION (s-E) MOBILE-SATELLITE (s-E)	Mobile-satellite applications	IMT (satellite component), ECC Dec (02)08.
1530 – 1535	SPACE OPERATION (s-E) MOBILE-SATELLITE (s-E) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile except aeronautical mobile 5.341 5.351 5.354	SPACE OPERATION (s-E) MOBILE-SATELLITE (s-E)	Mobile-satellite applications	IMT (satellite component), ECC Dec (02)08. Priority for GMDSS distress and safety communications.
1535 – 1559	MOBILE-SATELLITE (s-E) 5.208B 5.351A 5.341 5.351 5.353A 5.354 5.355 5.356 5.357 5.357A	MOBILE-SATELLITE (s-E)	Mobile-satellite applications	IMT (satellite component), ECC Dec (02)08. 1544-1545 MHz limited to distress and safety communications.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
1559 – 1610	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (s-E) (s-s) 5.208B, 5.328B 5.329A 5.341 5.362C	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (s-E) (s-s)	Radionavigation applications	Satellite navigation (Galileo (1559.42-1591.42 MHz), GLONASS (1592.9-1610.5 MHz) & GPS (1563.42-1587.42 MHz)).
1610 – 1610.6	MOBILE-SATELLITE (E-s) 5.351A AERONAUTICAL RADIONAVIGATION 5.341 5.355 5.364 5.366 5.367 5.368 5.371 5.372	MOBILE-SATELLITE (E-s) AERONAUTICAL RADIONAVIGATION	Mobile-satellite applications Radionavigation applications	IMT (satellite component). S-PCS (ERC Dec (97)03). Satellite navigation (GLONASS (1592.9-1610.5 MHz)).
1610.6 – 1613.8	MOBILE-SATELLITE (E-s) 5.351A RADIO ASTRONOMY AERONAUTICAL NAVIGATION 5.149 5.341 5.355 5.364 5.366 5.367 5.368 5.371 5.372	MOBILE-SATELLITE (E-s) AERONAUTICAL RADIONAVIGATION	Mobile-satellite applications	IMT (satellite component). S-PCS (ERC Dec (97)03).
1613.8 – 1626.5	MOBILE-SATELLITE (E-s) 5.351A AERONAUTICAL RADIONAVIGATION Mobile-satellite (s-E) 5.208B 5.341 5.355 5.364 5.365 5.366 5.367 5.368 5.371 5.372	MOBILE-SATELLITE (E-s) AERONAUTICAL RADIONAVIGATION Mobile-satellite (s-E)	Mobile-satellite applications	IMT (satellite component). S-PCS (ERC Dec (97)03).
1626.5 – 1645.5	MOBILE-SATELLITE (E-s) 5.351A 5.341 5.351 5.353A 5.354 5.355 5.374	MOBILE-SATELLITE (E-s)	Mobile-satellite applications	IMT (satellite component). Priority for GMDSS distress and safety communications.
1645.5 – 1646.5	MOBILE-SATELLITE (E-s) 5.351A 5.341 5.354 5.375	MOBILE-SATELLITE (E-s)	Mobile-satellite applications	Limited to distress and safety communications (incl. GMDSS).
1646.5 – 1660	MOBILE-SATELLITE (E-s) 5.351A 5.341 5.351 5.353A 5.354 5.355 5.357A 5.374 5.376	MOBILE-SATELLITE (E-s)	Mobile-satellite applications	IMT (satellite component).
1660 – 1660.5	MOBILE-SATELLITE (E-s) 5.351A RADIO ASTRONOMY 5.149 5.341 5.351 5.354 5.376A	MOBILE-SATELLITE (E-s) RADIO ASTRONOMY	Mobile-satellite applications	IMT (satellite component).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
1660.5 – 1668	RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379A	RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile		
1668 – 1668.4	MOBILE-SATELLITE (E-s) 5.351A 5.379B 5.379C RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379A	MOBILE-SATELLITE (E-s) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile		IMT (satellite component).
1668.4 – 1670	METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (E-s) 5.351A 5.379B 5.379C RADIO ASTRONOMY 5.149 5.341 5.379D 5.379E	METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (E-s) RADIO ASTRONOMY		IMT (satellite component).
1670 – 1675	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (s-E) MOBILE MOBILE-SATELLITE (E-s) 5.351A 5.379B 5.341 5.379D 5.379E 5.380A	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (s-E) MOBILE MOBILE-SATELLITE (E-s)		IMT (satellite component). ECC Dec (04)09. Reserved for harmonized European use (ECC Dec (02)07).
1675 – 1690	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (s-E) MOBILE except aeronautical mobile 5.341	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (s-E) MOBILE except aeronautical mobile	Meteorological applications	

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
1690 – 1700	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (s-E) Fixed Mobile except aeronautical mobile 5.289 5.341	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (s-E) Fixed Mobile except aeronautical mobile	Meteorological applications	
1700 – 1710	FIXED METEOROLOGICAL-SATELLITE (s-E) MOBILE except aeronautical mobile 5.289 5.341	FIXED METEOROLOGICAL-SATELLITE (s-E) Mobile except aeronautical mobile		
1710 – 1785	FIXED MOBILE 5.384A 5.149 5.341 5.385	FIXED MOBILE	TRA-ECS MCA services MCV services	Terrestrial radio applications capable of providing electronic communications services capable to coexist with GSM as per EC Decision 2009/766/EC as amended by 2011/251/EU. EC Decision 2008/294/EC. EC Decision 2010/166/EU.
1785 – 1800	FIXED MOBILE 5.384A	FIXED MOBILE	SRDs (details in Annex 5)	ERC Rec 70-03.
1800 – 1805	FIXED MOBILE 5.384A	MOBILE Fixed		Reserved for harmonized European use (ECC Dec (02)07
1805 – 1880	FIXED MOBILE 5.384A	FIXED MOBILE	TRA-ECS MCA services MCV services	Terrestrial radio applications capable of providing electronic communications services capable to coexist with GSM as per EC Decision 2009/766/EC as amended by 2011/251/EU. EC Decision 2008/294/EC. EC Decision 2010/166/EU.
1880 – 1900	FIXED MOBILE 5.384A 5.388A 5.388	MOBILE Fixed	DECT	EC Directive 91/287/EEC, ERC Dec (94)03.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
1900 – 1930	FIXED MOBILE 5.388A 5.388	FIXED MOBILE	UMTS/IMT (terrestrial)	TDD-Unpaired (1900-1920 MHz), FDD-Paired (1920-1980 MHz / 2110-2170 MHz). ERC Dec (06)01 & ERC Rec (01)01.
1930 – 1970	FIXED MOBILE 5.388A 5.388	MOBILE Fixed	UMTS/IMT (terrestrial)	FDD-Paired (1920-1980 MHz / 2110-2170 MHz). ERC Dec (06)01 & ERC Rec (01)01.
1970 – 1980	FIXED MOBILE 5.388A 5.388	MOBILE Fixed	UMTS/IMT (terrestrial)	FDD-Paired (1920-1980 MHz / 2110-2170 MHz). ERC Dec (06)01 & ERC Rec (01)01.
1980 – 2010	FIXED MOBILE MOBILE-SATELLITE (E-s) 5.351A 5.388 5.389A	MOBILE MOBILE-SATELLITE (E-s) Fixed		MSS in accordance with EC Decision 2007/98/EC. IMT (satellite component).
2010 – 2025	FIXED MOBILE 5.388A 5.388	MOBILE Fixed	SAB applications	No future assignments for SAB services in this band. Band identified for terrestrial UMTS/IMT-2000 TDD-unpaired (ERC Dec (06)01& ERC Rec (01)01).
2025 – 2110	SPACE OPERATION (E-s) (s-s) EARTH EXPLORATION-SATELLITE (E-s) (s-s) FIXED MOBILE 5.391 SPACE RESEARCH (E-s) (s-s) 5.392	FIXED MOBILE	SAB applications	ERC Rec 25-10 & ERC Rec T/R 13-01.
2110 – 2120	FIXED MOBILE 5.388A SPACE RESEARCH (deep space) (E-s) 5.388	MOBILE Fixed	UMTS/IMT (terrestrial)	FDD-Paired (2110-2170 MHz / 1920-1980 MHz). ERC Dec (06)01& ERC Rec (01)01.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
2120 – 2160	FIXED MOBILE 5.388A 5.388	MOBILE Fixed	UMTS/IMT (terrestrial)	FDD-Paired (2110-2170 MHz / 1920-1980 MHz). ERC Dec (06)01& ERC Rec (01)01.
2160 – 2170	FIXED MOBILE 5.388A 5.388	MOBILE Fixed	UMTS/IMT (terrestrial)	FDD-Paired (2110-2170 MHz / 1920-1980 MHz). ERC Dec (06)01& ERC Rec (01)01.
2170 – 2200	FIXED MOBILE MOBILE-SATELLITE (s-E) 5.351A 5.388 5.389A	MOBILE MOBILE-SATELLITE (s-E) Fixed		MSS in accordance with EC Decision 2007/98/EC. IMT(satellite component).
2200 – 2290	SPACE OPERATION (s-E) (s-s) EARTH EXPLORATION-SATELLITE (s-E) (s-s) FIXED MOBILE 5.391 SPACE RESEARCH (s-E) (s-s) 5.392	FIXED MOBILE	SAB applications	ERC Rec 25-10 & ERC Rec T/R 13-01.
2290 – 2300	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (s-E)	FIXED MOBILE except aeronautical mobile		
2300 – 2400	FIXED MOBILE 5.384A Amateur Radiolocation	FIXED MOBILE Amateur Radiolocation	SAB applications Amateur applications	ERC Rec 25-10.
2400 – 2450	FIXED MOBILE Amateur Radiolocation 5.150 5.282	FIXED MOBILE Amateur Radiolocation	SRDs (details in Annex 5) ISM applications Amateur applications	EC Decision 2006/771/EC as amended & ERC Rec 70-03.
2450 – 2483.5	FIXED MOBILE Radiolocation 5.150	FIXED MOBILE	SRDs (details in Annex 5) ISM applications	EC Decision 2006/771/EC as amended.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
2483.5 – 2500	FIXED MOBILE MOBILE-SATELLITE (s-E) 5.351A Radiolocation 5.150 5.371 5.398 5.399 5.402	FIXED MOBILE MOBILE-SATELLITE (s-E)	Mobile-satellite applications ISM applications	ERC Dec (97)03
2500 – 2520	FIXED 5.410 MOBILE except aeronautical mobile 5.384A	MOBILE except aeronautical mobile Fixed	Mobile applications	Terrestrial systems capable of providing electronic communications systems in accordance with EC Decision 2008/477/EC. IMT (terrestrial component).
2520 – 2655	FIXED 5.410 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 5.339 5.417C 5.417D 5.418B 5.418C	FIXED MOBILE except aeronautical mobile	SAB applications Mobile applications	ERC Rec 25-10. Terrestrial systems capable of providing electronic communications systems in accordance with EC Decision 2008/477/EC. IMT (terrestrial component).
2655 – 2670	FIXED 5.410 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.208B 5.413 5.416 Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149	FIXED MOBILE except aeronautical mobile Earth exploration-satellite (passive) Radio astronomy Space research (passive)		ERC Rec 25-10. Terrestrial systems capable of providing electronic communications systems in accordance with EC Decision 2008/477/EC. IMT (terrestrial component).
2670 – 2690	FIXED 5.410 MOBILE except aeronautical mobile 5.384A Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149	MOBILE except aeronautical mobile Fixed Radio astronomy		ERC Rec 25-10. Terrestrial systems capable of providing electronic communications systems in accordance with EC Decision 2008/477/EC. IMT (terrestrial component).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
2690 – 2700	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
2700 – 2900	AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation 5.423	AERONAUTICAL RADIONAVIGATION Radiolocation	Radionavigation applications	
2900 – 3100	RADIOLOCATION 5.424A RADIONAVIGATION 5.426 5.425 5.427	RADIOLOCATION RADIONAVIGATION	Radionavigation applications	
3100 – 3300	RADIOLOCATION Earth exploration-satellite (active) Space research (active) 5.149	RADIOLOCATION Earth exploration-satellite (active) Space research (active)		
3300 – 3400	RADIOLOCATION 5.149	RADIOLOCATION		
3400 – 3600	FIXED FIXED-SATELLITE (s-E) Mobile 5.340A Radiolocation	FIXED MOBILE	BWA Fixed links (3492.25-3500 MHz)	EC Decision 2008/411/EC. IMT (terrestrial component). ERC Rec 14-03 (paired with 3592.25-3600 MHz). ERC Rec (04)05. No future assignments for fixed links in this band shall be considered. Existing links to be migrated to other frequency bands if and when deemed necessary.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
3600 – 3800	FIXED FIXED-SATELLITE (s-E) Mobile	FIXED FIXED-SATELLITE (s-E) MOBILE	Fixed links	ERC Rec 12-08. Terrestrial systems capable for providing electronic communications services in accordance with EC Decision 2008/411/EC. ERC Rec (04)05.
3800 – 4200	FIXED FIXED-SATELLITE (s-E) Mobile	FIXED FIXED-SATELLITE (s-E)	Fixed links FSS	ERC Rec 12-08.
4200 – 4400	AERONAUTICAL RADIONAVIGATION 5.438 5.440	AERONAUTICAL RADIONAVIGATION		
4400 – 4500	FIXED MOBILE	FIXED MOBILE		
4500 – 4800	FIXED FIXED-SATELLITE (s-E) 5.441 MOBILE	FIXED FIXED-SATELLITE (s-E) MOBILE	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ITU RR Appendix 30B.
4800 – 4990	FIXED MOBILE 5.442 Radio astronomy 5.149 5.339	FIXED MOBILE except aeronautical mobile Radio astronomy	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
4990 – 5000	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive) 5.149	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5000 – 5010	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (E-s) 5.367	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (E-s)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. For future use by Galileo,
5010 – 5030	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (s-E) (s-s) 5.328B 5.443B 5.367	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (s-E) (s-s)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. Satellite navigation (Galileo C1),

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
5030 – 5091	AERONAUTICAL RADIONAVIGATION 5.367 5.444	AERONAUTICAL RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5091 – 5150	AERONAUTICAL RADIONAVIGATION AERONAUTICAL MOBILE 5.444B 5.367 5.444 5.444A	AERONAUTICAL RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5150 – 5250	AERONAUTICAL RADIONAVIGATION FIXED-SATELLITE (E-s) 5.447A MOBILE except aeronautical mobile 5.446A 5.446B 5.446 5.446C 5.447B 5.447C	FIXED-SATELLITE (E-s) MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended & EC Decision 2005/513/EC as amended. 5150-5200 MHz reserved for BBDR radio applications (ECC Rec (08)04).
5250 – 5255	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.447D MOBILE except aeronautical mobile 5.446A 5.447F 5.448A	RADIOLOCATION MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended & EC Decision 2005/513/EC as amended.
5255 – 5350	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) MOBILE except aeronautical mobile 5.446A 5.447F 5.448A	RADIOLOCATION MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended & EC Decision 2005/513/EC as amended.
5350 – 5460	EARTH EXPLORATION-SATELLITE (active) 5.448B SPACE RESEARCH (active) 5.448C AERONAUTICAL RADIONAVIGATION 5.449 RADIOLOCATION 5.448D	AERONAUTICAL RADIONAVIGATION RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
5460 – 5470	RADIONAVIGATION 5.449 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION 5.448D 5.448B	RADIONAVIGATION RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
5470 – 5570	MARITIME RADIONAVIGATION MOBILE except aeronautical mobile 5.446A 5.450A EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION 5.450B 5.448B	MARITIME RADIONAVIGATION MOBILE except aeronautical mobile RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended & EC Decision 2005/513/EC as amended.
5570 – 5650	MARITIME RADIONAVIGATION MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B 5.452	MARITIME RADIONAVIGATION MOBILE except aeronautical mobile RADIOLOCATION	SRDs (details in Annex 5) Meteorological radars.	EC Decision 2006/771/EC as amended & EC Decision 2005/513/EC as amended.
5650 – 5725	RADIOLOCATION MOBILE except aeronautical mobile 5.446A 5.450A Amateur Space research (deep space) 5.282	RADIOLOCATION MOBILE except aeronautical mobile Amateur Amateur-satellite (E-s)	SRDs (details in Annex 5) Amateur applications	EC Decision 2006/771/EC as amended & EC Decision 2005/513/EC as amended. Amateur-satellite applications limited within the band 5650-5670 MHz.
5725 – 5830	FIXED-SATELLITE (E-s) RADIOLOCATION Amateur 5.150	FIXED-SATELLITE (E-s) RADIOLOCATION Amateur Mobile	SRDs (details in Annex 5) ISM applications (5725-5875 MHz) Amateur applications	EC Decision 2006/771/EC as amended. Earmarked for BFWA applications within the band 5725-5855 MHz (ECC Rec (06)04).

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
5830 – 5850	FIXED-SATELLITE (E-s) RADIOLOCATION Amateur Amateur-satellite (s-E) 5.150	FIXED-SATELLITE (E-s) RADIOLOCATION Amateur Amateur-satellite (s-E) Mobile	SRDs (details in Annex 5) ISM applications (5725-5875 MHz) Amateur applications	EC Decision 2006/771/EC as amended. Earmarked for BFWA applications within the band 5725-5855 MHz (ECC Rec (06)04).
5850 – 5925	FIXED FIXED-SATELLITE (E-s) MOBILE 5.150	FIXED FIXED-SATELLITE (E-s) MOBILE	SRDs (details in Annex 5) ISM applications (5725-5875 MHz)	EC Decision 2006/771/EC as amended & ERC Rec 70-03. EC Decision 2008/671/EC (safety related applications of ITS within the band 5875-5905 MHz). The band 5855-5875 MHz is earmarked for the non-safety related applications of ITS (ECC Rec (08)01). Earmarked for BFWA applications within the band 5725-5855 MHz (ECC Rec (06)04).
5925 – 6425	FIXED FIXED-SATELLITE (E-s) 5.457A MOBILE	FIXED FIXED-SATELLITE (E-s)	Fixed links FSS SRDs (details in Annex 5)	ERC Rec 14-01. EC Decision 2006/771/EC as amended.
6425 – 6700	FIXED FIXED-SATELLITE (E-s) MOBILE 5.149 5.440 5.458	FIXED FIXED-SATELLITE (E-s) Earth exploration-satellite (passive)	Fixed links SRDs (details in Annex 5)	ERC Rec 14-02. EC Decision 2006/771/EC as amended.
6700 – 7075	FIXED FIXED-SATELLITE (E-s) (s-E) 5.441 MOBILE 5.458 5.458A 5.458B 5.458C	FIXED FIXED-SATELLITE (E-s) (s-E) Earth exploration-satellite (passive)	Fixed links SAB applications SRDs (details in Annex 5)	ERC Rec 14-02. ITU RR Appendix 30B. EC Decision 2006/771/EC as amended.
7075 – 7145	FIXED MOBILE 5.458	FIXED Earth exploration-satellite (passive)	Fixed links SAB applications	ERC Rec 14-02 & ECC Rec (02)06.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
7145 – 7235	FIXED MOBILE SPACE RESEARCH (E-s) 5.460 5.458	FIXED MOBILE Earth exploration-satellite (passive)	SAB applications	ECC Rec (02)06.
7235 – 7250	FIXED MOBILE 5.458	FIXED Earth exploration-satellite (passive)	SAB applications	ECC Rec (02)06.
7250 – 7300	FIXED FIXED-SATELLITE (s-E) MOBILE 5.461	FIXED FIXED-SATELLITE (s-E) MOBILE	SAB applications	ECC Rec (02)06.
7300 – 7450	FIXED FIXED-SATELLITE (s-E) MOBILE except aeronautical mobile 5.461	FIXED FIXED-SATELLITE (s-E) MOBILE except aeronautical mobile	SAB applications	ECC Rec (02)06.
7450 – 7550	FIXED FIXED-SATELLITE (s-E) METEOROLOGICAL-SATELLITE (s-E) MOBILE except aeronautical mobile 5.461A	FIXED FIXED-SATELLITE (s-E) METEOROLOGICAL-SATELLITE (s-E) MOBILE except aeronautical mobile	SAB applications	ECC Rec (02)06.
7550 – 7750	FIXED FIXED-SATELLITE (s-E) MOBILE except aeronautical mobile	FIXED FIXED-SATELLITE (s-E) MOBILE except aeronautical mobile	SAB applications	ECC Rec (02)06.
7750 – 7850	FIXED METEOROLOGICAL-SATELLITE (s-E) 5.461B MOBILE except aeronautical mobile	FIXED METEOROLOGICAL-SATELLITE (s-E) MOBILE except aeronautical mobile	SAB applications	ECC Rec (02)06.
7850 – 7900	FIXED MOBILE except aeronautical mobile	FIXED MOBILE except aeronautical mobile	Fixed links	ECC Rec (02)06.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
7900 – 8025	FIXED FIXED-SATELLITE (E-s) MOBILE 5.461	FIXED FIXED-SATELLITE (E-s) MOBILE	Fixed links	ECC Rec (02)06.
8025 – 8175	EARTH EXPLORATION-SATELLITE (s-E) FIXED FIXED-SATELLITE (E-s) MOBILE 5.463 5.462A	EARTH EXPLORATION-SATELLITE (s-E) FIXED FIXED-SATELLITE (E-s) MOBILE	Fixed links	ECC Rec (02)06.
8175 – 8215	EARTH EXPLORATION-SATELLITE (s-E) FIXED FIXED-SATELLITE (E-s) METEOROLOGICAL-SATELLITE (E-s) MOBILE 5.463 5.462A	EARTH EXPLORATION-SATELLITE (s-E) FIXED FIXED-SATELLITE (E-s) METEOROLOGICAL-SATELLITE (E-s) MOBILE	Fixed links	ECC Rec (02)06.
8215 – 8400	EARTH EXPLORATION SATELLITE (s-E) FIXED FIXED-SATELLITE (E-s) MOBILE 5.463 5.462A	EARTH EXPLORATION SATELLITE (s-E) FIXED FIXED-SATELLITE (E-s)	Fixed links	ECC Rec (02)06.
8400 – 8500	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (s-E) 5.465	FIXED SPACE RESEARCH (s-E)	Fixed links	ECC Rec (02)06.
8500 – 8550	RADIOLOCATION	RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
8550 – 8650	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.469A	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
8650 – 8750	RADIOLOCATION	RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.

Part B ~ The Radio Spectrum in MHz

27.5 MHz to 10 000 MHz

Frequency Band (MHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
8750 – 8850	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.470	RADIOLOCATION AERONAUTICAL RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
8850 – 9000	RADIOLOCATION MARITIME RADIONAVIGATION 5.472	RADIOLOCATION MARITIME RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
9000 – 9200	AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation	AERONAUTICAL RADIONAVIGATION Radiolocation	SRDs (details in Annex 5) Radionavigation applications	EC Decision 2006/771/EC as amended.
9200 – 9300	RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.474	RADIOLOCATION MARITIME RADIONAVIGATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended & ERC Rec 70-03.
9300 – 9500	RADIONAVIGATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION 5.427 5.474 5.475 5.475A 5.475B 5.476A	RADIONAVIGATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION	SRDs (details in Annex 5) Radionavigation applications Meteorological applications	EC Decision 2006/771/EC as amended & ERC Rec 70-03.
9500 – 9800	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION SPACE RESEARCH (active) 5.476A	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION SPACE RESEARCH (active)	SRDs (details in Annex 5) Radionavigation applications	EC Decision 2006/771/EC as amended & ERC Rec 70-03.
9800 - 9900	RADIOLOCATION Earth exploration-satellite (active) Space research (active) Fixed 5.478A 5.478B	RADIOLOCATION Earth exploration-satellite (active) Space research (active)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.
9900 – 10000	RADIOLOCATION Fixed 5.479	RADIOLOCATION Fixed	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended.

Part C

The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
10 – 10.45	FIXED MOBILE RADIOLOCATION Amateur 5.479	FIXED MOBILE RADIOLOCATION Amateur MLT01	SAB applications Amateur applications SRDs (details in Annex 5)	ERC Rec 12-05. ERC Rec 25-10. EC Decisions 2006/771/EC as amended & 2007/131/EC.
10.45 – 10.5	RADIOLOCATION Amateur Amateur-Satellite	RADIOLOCATION Amateur Amateur-Satellite	SRDs (details in Annex 5) Amateur applications	EC Decision 2006/771/EC as amended.
10.5 – 10.55	FIXED MOBILE Radiolocation	FIXED MOBILE Radiolocation	SRDs (details in Annex 5) SAB applications	EC Decision 2006/771/EC as amended & ERC Rec 70-03. ERC Rec 12-05. ERC Rec 25-10.
10.55 – 10.6	FIXED MOBILE except aeronautical mobile Radiolocation	FIXED MOBILE except aeronautical mobile Radiolocation	SRDs (details in Annex 5) SAB applications	EC Decision 2006/771/EC as amended & ERC Rec 70-03. ERC Rec 12-05. ERC Rec 25-10.
10.6 – 10.68	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation 5.149 5.482 5.482A	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation	SAB	ERC Rec 12-05. ERC Rec 25-10.
10.68 – 10.7	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
10.7 – 11.7	FIXED FIXED-SATELLITE (s-E) 5.441 5.484A (E-s) 5.484 MOBILE except aeronautical mobile	FIXED FIXED-SATELLITE (s-E) (E-s) MOBILE except aeronautical mobile	FSS Fixed links	ITU RR Appendix 30B (10.7-10.95 GHz / 11.2-11.45 GHz). Fixed service limited to high capacity fixed links (ERC Dec(00)08, ERC Rec 12-06).

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
11.7 – 12.5	FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 5.492 5.487 5.487A	FIXED MOBILE except aeronautical mobile BROADCASTING-SATELLITE	SAB Satellite broadcasting	ERC Dec(00)08. ITU RR Appendix 30.
12.5 – 12.75	FIXED-SATELLITE (s-E) 5.484A (E-s)	FIXED-SATELLITE (s-E) (E-s)	FSS	
12.75 – 13.25	FIXED FIXED-SATELLITE (E-s) 5.441 MOBILE Space research (deep space) (s-E)	FIXED FIXED-SATELLITE (E-s)	Fixed links SAB applications	ERC Rec 12-02. ITU RR Appendix 30B.
13.25 – 13.4	EARTH EXPLORATION-SATELLITE (active) AERONAUTICAL RADIONAVIGATION 5.497 SPACE RESEARCH (active) 5.498A	AERONAUTICAL RADIONAVIGATION SPACE RESEARCH (active)		Aeronautical radionavigation service limited to Doppler navigation aids.
13.4 – 13.75	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.501A Standard frequency and time signal-satellite (E-s) 5.500 5.501B	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH	SRDs (details in Annex 5)	ERC Rec 70-03.
13.75 – 14.0	FIXED-SATELLITE (E-s) 5.484A RADIOLOCATION Earth exploration-satellite Standard frequency and time signal-satellite (E-s) Space research 5.500 5.502 5.503	FIXED-SATELLITE (E-s) RADIOLOCATION Space research	SRDs (details in Annex 5) FSS	ERC Rec 70-03.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
14.0 – 14.25	FIXED-SATELLITE (E-s) 5.457A 5.484A 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (E-s) 5.504B 5.504C 5.506A Space research 5.504A	FIXED-SATELLITE (E-s) Mobile-satellite (E-s) Space research	FSS	ERC Rec 13-03.
14.25 – 14.3	FIXED-SATELLITE (E-s) 5.457A 5.484A 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (E-s) 5.504B 5.506A 5.508A Space research 5.504A	FIXED-SATELLITE (E-s) Mobile-satellite (E-s) Space research	FSS	ERC Rec 13-03.
14.3 – 14.4	FIXED FIXED-SATELLITE (E-s) 5.457A 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (E-s) 5.504B 5.506A 5.509A Radionavigation-satellite 5.504A	FIXED-SATELLITE (E-s) Mobile-satellite (E-s)	FSS	ERC Rec 13-03.
14.4 – 14.47	FIXED FIXED-SATELLITE (E-s) 5.457A 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (E-s) 5.504B 5.506A 5.509A Space research (s-E) 5.504A	FIXED-SATELLITE (E-s) Mobile-satellite (E-s)	FSS	ERC Rec 13-03.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
14.47 – 14.5	FIXED FIXED-SATELLITE (E-s) 5.457A 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (E-s) 5.504B 5.506A 5.509A Radio astronomy 5.149 5.504A	FIXED-SATELLITE (E-s) Mobile-satellite (E-s) Radio astronomy	FSS	ERC Rec 13-03.
14.5 – 14.8	FIXED FIXED-SATELLITE (E-s) MOBILE Space research	FIXED MOBILE	Fixed links	ITU-R F.636-3.
14.8 – 15.35	FIXED MOBILE Space research 5.339	FIXED MOBILE	Fixed links	ITU-R F.636-3.
15.35 – 15.4	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
15.4 – 15.43	AERONAUTICAL RADIONAVIGATION 5.511D	AERONAUTICAL RADIONAVIGATION		
15.43 – 15.63	FIXED-SATELLITE (E-s) 5.511A AERONAUTICAL RADIONAVIGATION 5.511C	FIXED-SATELLITE (E-s) AERONAUTICAL RADIONAVIGATION		
15.63 – 15.7	AERONAUTICAL RADIONAVIGATION 5.511D	AERONAUTICAL RADIONAVIGATION		
15.7 – 16.6	RADIOLOCATION	RADIOLOCATION		
16.6 – 17.1	RADIOLOCATION Space research (deep space) (E-s)	RADIOLOCATION		
17.1 – 17.2	RADIOLOCATION	RADIOLOCATION Mobile	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended & ERC Rec 70-03.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
17.2 – 17.3	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.513A	RADIOLOCATION Mobile	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended & ERC Rec 70-03.
17.3 – 17.7	FIXED-SATELLITE (E-s) 5.516 (s-E) 5.516A 5.516B Radiolocation	FIXED-SATELLITE (E-s) (s-E) Radiolocation		ITU RR Appendix 30A.
17.7 – 18.1	FIXED FIXED-SATELLITE (s-E) 5.484A (E-s) 5.516 MOBILE	FIXED FIXED-SATELLITE (s-E) (E-s)	Fixed links	ERC Rec 12-03 & ERC Dec(00)07. ITU RR Appendix 30A.
18.1 – 18.4	FIXED FIXED-SATELLITE (s-E) 5.484A 5.516B (E-s) 5.520 MOBILE 5.519	FIXED FIXED-SATELLITE (s-E) (E-s)	Fixed links	ERC Rec 12-03 & ERC Dec(00)07.
18.4 – 18.6	FIXED FIXED-SATELLITE (s-E) 5.484A 5.516B MOBILE	FIXED FIXED-SATELLITE (s-E)	Fixed links	ERC Rec 12-03 & ERC Dec(00)07.
18.6 – 18.8	EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (s-E) 5.522B MOBILE except aeronautical mobile Space research (passive) 5.522A	FIXED FIXED-SATELLITE (s-E)	Fixed links	ERC Rec 12-03 & ERC Dec(00)07.
18.8 – 19.3	FIXED FIXED-SATELLITE (s-E) 5.516B 5.523A MOBILE	FIXED FIXED-SATELLITE (s-E)	Fixed links	ERC Rec 12-03 & ERC Dec(00)07.
19.3 – 19.7	FIXED FIXED-SATELLITE (s-E) (E-s) 5.523B 5.523C 5.523D 5.523E MOBILE	FIXED FIXED-SATELLITE (s-E) (E-s)	Fixed links	ERC Rec 12-03 & ERC Dec(00)07.
19.7 – 20.1	FIXED-SATELLITE (s-E) 5.484A 5.516B Mobile-satellite (s-E)	FIXED-SATELLITE (s-E) Mobile-satellite (s-E)		

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
20.1 – 20.2	FIXED-SATELLITE (s-E) 5.484A 5.516B MOBILE-SATELLITE (s-E) 5.525 5.526 5.527 5.528	FIXED-SATELLITE (s-E) MOBILE-SATELLITE (s-E)		
20.2 – 21.2	FIXED-SATELLITE (s-E) MOBILE-SATELLITE (s-E) Standard frequency and time signal-satellite (s-E)	FIXED-SATELLITE (s-E) MOBILE-SATELLITE (s-E)		
21.2 – 21.4	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)		Designated for SAP / SAB applications (ERC Rec 25-10).
21.4 – 22	FIXED MOBILE BROADCASTING-SATELLITE 5.208B 5.530	BROADCASTING-SATELLITE MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU.
22 – 22.21	FIXED MOBILE except aeronautical mobile 5.149	FIXED MOBILE except aeronautical mobile MLT06	Fixed links SRDs (details in Annex 5)	ERC Rec T/R 13-02. EC Decision 2005/50/EC as amended by 2011/485/EU.
22.21 – 22.5	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) 5.149 5.532	FIXED MOBILE except aeronautical mobile MLT06	Fixed links SRDs (details in Annex 5)	ERC Rec T/R 13-02. EC Decision 2005/50/EC as amended by 2011/485/EU.
22.5 – 22.55	FIXED MOBILE	FIXED MOBILE MLT06	Fixed links SRDs (details in Annex 5)	ERC Rec T/R 13-02. EC Decision 2005/50/EC as amended by 2011/485/EU.
22.55 – 22.6	FIXED INTER-SATELLITE 5.338A MOBILE 5.149	FIXED MOBILE MLT06	Fixed links SRDs (details in Annex 5)	ERC Rec T/R 13-02. EC Decision 2005/50/EC as amended by 2011/485/EU.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
22.6 – 23	FIXED INTER-SATELLITE 5.338A MOBILE 5.149	FIXED MOBILE MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU. Designated for SAP / SAB applications (ERC Rec 25-10).
23 – 23.55	FIXED INTER-SATELLITE 5.338A MOBILE 5.149	FIXED MOBILE MLT06	Fixed links SRDs (details in Annex 5)	ERC Rec T/R 13-02. EC Decision 2005/50/EC as amended by 2011/485/EU.
23.55 – 23.6	FIXED MOBILE	FIXED MOBILE MLT06	Fixed links SRDs (details in Annex 5)	ERC Rec T/R 13-02. EC Decision 2005/50/EC as amended by 2011/485/EU.
23.6 – 24	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) MLT06		All emissions prohibited.
24 – 24.05	AMATEUR AMATEUR-SATELLITE 5.150	AMATEUR AMATEUR-SATELLITE MLT06	SRDs (details in Annex 5) ISM applications Amateur applications	EC Decision 2005/50/EC as amended by 2011/485/EU & ERC Rec 70-03.
24.05 – 24.25	RADIOLOCATION Amateur Earth exploration-satellite (active) 5.150	RADIOLOCATION Amateur Earth exploration-satellite (active) MLT06	SRDs (details in Annex 5) ISM applications Amateur applications	EC Decision 2005/50/EC as amended by 2011/485/EU, EC Decision 2006/771/EC as amended & ERC Rec 70-03.
24.25 – 24.45	FIXED	FIXED MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU & EC Decision 2006/771/EC as amended. Designated for SAP / SAB applications (ERC Rec 25-10).

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
24.45 – 24.5	FIXED INTER-SATELLITE	FIXED MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU & EC Decision 2006/771/EC as amended. Designated for SAP / SAB applications (ERC Rec 25-10).
24.5 – 24.65	FIXED INTER-SATELLITE	FIXED MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU & EC Decision 2006/771/EC as amended. ERC Rec T/R 13-02. Under consideration for FWA (ERC Rec (00)05).
24.65 – 24.75	FIXED INTER-SATELLITE	FIXED MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU & EC Decision 2006/771/EC as amended. ERC Rec T/R 13-02. Under consideration for FWA (ERC Rec (00)05).
24.75 – 25.25	FIXED	FIXED MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU & EC Decision 2006/771/EC as amended. ERC Rec T/R 13-02. Under consideration for FWA (ERC Rec (00)05).
25.25 – 25.5	FIXED INTER-SATELLITE 5.536 MOBILE Standard frequency and time signal-satellite (E-s)	FIXED MOBILE MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU & EC Decision 2006/771/EC as amended. ERC Rec T/R 13-02. Under consideration for FWA (ERC Rec (00)05).

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
25.5 – 26.5	EARTH EXPLORATION-SATELLITE (s-E) FIXED INTER-SATELLITE 5.536 MOBILE SPACE RESEARCH (s-E) Standard frequency and time signal-satellite (E-s) 5.536A	FIXED MOBILE MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU & EC Decision 2006/771/EC as amended. ERC Rec T/R 13-02. Under consideration for FWA (ERC Rec (00)05).
26.5 – 27	EARTH EXPLORATION-SATELLITE (s-E) FIXED INTER-SATELLITE 5.536 MOBILE SPACE RESEARCH (s-E) Standard frequency and time signal-satellite (E-s) 5.536A	FIXED MOBILE SPACE RESEARCH (s-E) Earth exploration-satellite (s-E) MLT06	SRDs (details in Annex 5)	EC Decision 2005/50/EC as amended by 2011/485/EU & EC Decision 2006/771/EC as amended.
27 – 27.5	FIXED INTER-SATELLITE 5.536 MOBILE	FIXED MOBILE Earth exploration-satellite (s-E)		
27.5 – 28.5	FIXED FIXED-SATELLITE (E-s) 5.484A 5.516B 5.539 MOBILE 5.538 5.540	FIXED FIXED-SATELLITE (E-s)		Under consideration for FWA (ERC Rec (01)03). ECC Dec (05)01 & ERC Rec T/R 13-02.
28.5 – 29.1	FIXED FIXED-SATELLITE (E-s) 5.484A 5.516B 5.523A 5.539 MOBILE Earth exploration-satellite (E-s) 5.541 5.540	FIXED FIXED-SATELLITE (E-s)		Under consideration for FWA (ERC Rec (01)03). ECC Dec (05)01 & ERC Rec T/R 13-02.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
29.1 – 29.5	FIXED FIXED-SATELLITE (E-s) 5.516B 5.523C 5.523E 5.535A 5.539 5.541A MOBILE Earth exploration-satellite (E-s) 5.541 5.540	FIXED FIXED-SATELLITE (E-s)		Under consideration for FWA (ERC Rec (01)03). ECC Dec (05)01 & ERC Rec T/R 13-02.
29.5 – 29.9	FIXED-SATELLITE (E-s) 5.484A 5.516B 5.539 Earth exploration-satellite (E-s) 5.541 Mobile-satellite (E-s) 5.540	FIXED-SATELLITE (E-s) Earth exploration-satellite (E-s) Mobile-satellite (E-s)		
29.9 – 30	FIXED-SATELLITE (E-s) 5.484A 5.516B 5.539 MOBILE-SATELLITE (E-s) Earth exploration-satellite (E-s) 5.541 5.543 5.525 5.526 5.527 5.538 5.540	FIXED-SATELLITE (E-s) MOBILE-SATELLITE (E-s) Earth exploration-satellite (E-s)		
30 – 31	FIXED-SATELLITE (E-s) 5.338A MOBILE-SATELLITE (E-s) Standard frequency and time signal-satellite (s-E)	FIXED-SATELLITE (E-s) MOBILE-SATELLITE (E-s)		ECC Dec (10)02.
31 – 31.3	FIXED 5.338A MOBILE Standard frequency and time signal-satellite (s-E) Space research 5.544 5.149	FIXED MOBILE		ECC Rec 02-02.
31.3 – 31.5	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited, ECC Dec (10)02.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
31.5 – 31.8	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile		
31.8 – 32	FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (s-E) 5.547 5.548	FIXED RADIONAVIGATION		ERC Rec (01)02 & ECC Rec (04)06.
32 – 32.3	FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (s-E) 5.547 5.548	FIXED RADIONAVIGATION		ERC Rec (01)02 & ECC Rec (04)06.
32.3 – 33	FIXED 5.547A INTER-SATELLITE RADIONAVIGATION 5.547 5.548	FIXED RADIONAVIGATION		ERC Rec (01)02 & ECC Rec (04)06.
33 – 33.4	FIXED 5.547A RADIONAVIGATION 5.547	FIXED RADIONAVIGATION		ERC Rec (01)02 & ECC Rec (04)06.
33.4 – 34.2	RADIOLOCATION 5.549	RADIOLOCATION		
34.2 – 34.7	RADIOLOCATION SPACE RESEARCH (deep space) (E-s) 5.549	RADIOLOCATION		
34.7 – 35.2	RADIOLOCATION Space research 5.549	RADIOLOCATION		

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
35.2 – 35.5	METEOROLOGICAL AIDS RADIOLOCATION 5.549	METEOROLOGICAL AIDS RADIOLOCATION		
35.5 – 36	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.549 5.549A	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active)		
36 – 37	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.149 5.550A	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)		
37 – 37.5	FIXED MOBILE SPACE RESEARCH (s-E) 5.547	FIXED SPACE RESEARCH (s-E)	Fixed links	ERC Rec T/R 12-01
37.5 – 38	FIXED FIXED-SATELLITE (s-E) MOBILE SPACE RESEARCH (s-E) Earth exploration-satellite (s-E) 5.547	FIXED FIXED-SATELLITE (s-E) SPACE RESEARCH (s-E)		ERC Rec T/R 12-01 & ERC Dec (00)02.
38 – 39.5	FIXED FIXED-SATELLITE (s-E) MOBILE Earth exploration-satellite (s-E) 5.547	FIXED FIXED-SATELLITE (s-E)	Fixed links	ERC Rec T/R 12-01 & ERC Dec (00)02.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
39.5 – 40	FIXED FIXED-SATELLITE (s-E) 5.516B MOBILE MOBILE-SATELLITE (s-E) Earth exploration-satellite (s-E) 5.547	FIXED FIXED-SATELLITE (s-E) MOBILE MOBILE-SATELLITE (s-E) Earth exploration-satellite (s-E)		ERC Dec (00)02.
40 – 40.5	EARTH EXPLORATION-SATELLITE (E-s) FIXED FIXED-SATELLITE (s-E) 5.516B MOBILE MOBILE-SATELLITE (s-E) SPACE RESEARCH (E-s) Earth exploration-satellite (s-E)	FIXED FIXED-SATELLITE (s-E) MOBILE MOBILE-SATELLITE (s-E) Earth exploration-satellite (s-E)		ERC Dec (00)02.
40.5 – 41	FIXED FIXED-SATELLITE (s-E) BROADCASTING BROADCASTING-SATELLITE Mobile 5.547	FIXED BROADCASTING BROADCASTING-SATELLITE		ECC Dec (02)04. Under consideration for MWS and MVDS (ERC Dec (99)15 & ECC Rec (01)04).
41 – 42.5	FIXED FIXED-SATELLITE (s-E) 5.516B BROADCASTING BROADCASTING-SATELLITE Mobile 5.547 5.551H 5.551I	FIXED BROADCASTING BROADCASTING-SATELLITE		ECC Dec (02)04. Under consideration for MWS and MVDS (ERC Dec (99)15 & ECC Rec (01)04).
42.5 – 43.5	FIXED FIXED-SATELLITE (E-s) 5.552 MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149 5.547	FIXED FIXED-SATELLITE (E-s) MOBILE except aeronautical mobile RADIO ASTRONOMY		ECC Dec (02)04. Under consideration for MWS and MVDS (ERC Dec (99)15 & ECC Rec (01)04).
43.5 – 45.5	MOBILE 5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554	MOBILE MOBILE-SATELLITE		

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
45.5 – 47	MOBILE 5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554	MOBILE MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE		
47 – 47.2	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE	Amateur applications	
47.2 – 47.5	FIXED FIXED-SATELLITE (E-s) 5.552 MOBILE 5.552A	FIXED FIXED-SATELLITE (E-s) MOBILE		Designated for SAP / SAB applications (ERC Rec 25-10).
47.5 – 47.9	FIXED FIXED-SATELLITE (E-s) 5.552 (s-E) 5.516B 5.554A MOBILE	FIXED FIXED-SATELLITE (E-s) (s-E) MOBILE		Designated for SAP / SAB applications (ERC Rec 25-10).
47.9 – 48.2	FIXED FIXED-SATELLITE (E-s) 5.552 MOBILE 5.552A	FIXED FIXED-SATELLITE (E-s) MOBILE		Designated for SAP / SAB applications (ERC Rec 25-10).
48.2 – 48.54	FIXED FIXED-SATELLITE (E-s) 5.552 (s-E) 5.516B 5.554A 5.555B MOBILE	FIXED FIXED-SATELLITE (E-s) (s-E) MOBILE		ERC Rec 12-10. Designated for SAP / SAB applications (ERC Rec 25-10).
48.54 – 49.44	FIXED FIXED-SATELLITE (E-s) 5.552 MOBILE 5.149 5.340 5.555	FIXED FIXED-SATELLITE (E-s) MOBILE		ERC Rec 12-10. All emissions prohibited from airborne stations in the band 48.94-49.04. Designated for SAP / SAB applications (ERC Rec 25-10).
49.44 – 50.2	FIXED FIXED-SATELLITE (E-s) 5.552 (s-E) 5.516B 5.554A 5.555B MOBILE	FIXED FIXED-SATELLITE (E-s) (s-E) MOBILE		ERC Rec 12-10. Designated for SAP / SAB applications (ERC Rec 25-10).

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
50.2 – 50.4	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)		All emissions prohibited.
50.4 – 51.4	FIXED FIXED-SATELLITE (E-s) 5.338A MOBILE Mobile-satellite (E-s)	FIXED FIXED-SATELLITE (E-s) Mobile-satellite (E-s)		
51.4 – 52.6	FIXED 5.338A MOBILE 5.547 5.556	FIXED MOBILE		ERC Rec 12-11.
52.6 – 54.25	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.556	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)		All emissions prohibited.
54.25 – 55.78	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.556A SPACE RESEARCH (passive)	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)		
55.78 – 56.9	EARTH EXPLORATION-SATELLITE (passive) FIXED 5.557A INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE SPACE RESEARCH (passive)		ERC Rec 12-12.
56.9 – 57	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.558A MOBILE 5.558 SPACE RESEARCH (passive) 5.547	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)		ERC Rec 12-12.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
57 – 58.2	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE SPACE RESEARCH (passive)	SRDs (details in Annex 5) Fixed links	EC Decision 2006/771/EC as amended. ERC Rec (09)01.
58.2 – 59	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.547 5.556	EARTH EXPLORATION-SATELLITE (passive) FIXED SPACE RESEARCH (passive)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ERC Rec (09)01.
59 – 59.3	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 RADIOLOCATION 5.559 SPACE RESEARCH (passive)	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE RADIOLOCATION SPACE RESEARCH (passive)	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ERC Rec (09)01.
59.3 – 62	FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559 5.138	FIXED INTER-SATELLITE MOBILE RADIOLOCATION	SRDs (details in Annex 5) ISM applications (61-61.5 GHz)	EC Decision 2006/771/EC as amended.ERC Rec (09)01.
62 – 63	FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559	INTER-SATELLITE MOBILE RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ERC Rec (09)01.
63 – 64	FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559	INTER-SATELLITE MOBILE RADIOLOCATION	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ERC Rec (09)01.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
64 – 65	FIXED INTER-SATELLITE MOBILE except aeronautical mobile 5.547 5.556	FIXED INTER-SATELLITE MOBILE except aeronautical mobile	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ECC Rec (05)02.
65 – 66	EARTH EXPLORATION-SATELLITE FIXED INTER-SATELLITE MOBILE except aeronautical mobile SPACE RESEARCH 5.547	EARTH EXPLORATION-SATELLITE FIXED INTER-SATELLITE MOBILE except aeronautical mobile SPACE RESEARCH	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ECC Rec (05)02.
66 – 71	INTER-SATELLITE MOBILE 5.553 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554	INTER-SATELLITE MOBILE MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE		
71 – 74	FIXED FIXED-SATELLITE (s-E) MOBILE MOBILE-SATELLITE (s-E)	FIXED FIXED-SATELLITE (s-E) MOBILE MOBILE-SATELLITE (s-E)		ECC Rec (05)07.
74 – 76	FIXED FIXED-SATELLITE (s-E) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (s-E) 5.561	FIXED FIXED-SATELLITE (s-E) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (s-E)	SRDs (details in Annex 5)	EC Decision 2006/771/EC. ECC Rec (05)07.
76 – 77.5	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (s-E) 5.149	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (s-E)	SRDs (details in Annex 5) Amateur applications	EC Decision 2004/545/EC & EC Decision 2006/771/EC as amended.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
77.5 – 78	AMATEUR AMATEUR-SATELLITE Radio astronomy Space research (s-E) 5.149	AMATEUR AMATEUR-SATELLITE Radio astronomy Space research (s-E)	SRDs (details in Annex 5) Amateur applications	EC Decision 2004/545/EC, EC Decision 2006/771/EC as amended & ERC Rec 70-03.
78 – 79	RADIOLOCATION Amateur Amateur-satellite Radio astronomy Space research (s-E) 5.149 5.560	RADIOLOCATION Amateur Amateur-satellite Radio astronomy Space research (s-E)	SRDs (details in Annex 5) Amateur applications	EC Decision 2004/545/EC & EC Decision 2006/771/EC as amended.
79 – 81	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (s-E) 5.149	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite	SRDs (details in Annex 5) Amateur applications	EC Decision 2004/545/EC & EC Decision 2006/771/EC as amended.
81 – 84	FIXED FIXED-SATELLITE (E-s) MOBILE MOBILE-SATELLITE (E-s) RADIO ASTRONOMY Space research (s-E) 5.149 5.561A	FIXED FIXED-SATELLITE (E-s) MOBILE MOBILE-SATELLITE (E-s) RADIO ASTRONOMY Space research (s-E) Amateur Amateur-satellite	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ECC Rec (05)07. Amateur applications are limited within the band 81 – 81.5 MHz.
84 – 86	FIXED FIXED-SATELLITE (E-s) MOBILE RADIO ASTRONOMY 5.149	FIXED FIXED-SATELLITE (E-s) MOBILE RADIO ASTRONOMY	SRDs (details in Annex 5)	EC Decision 2006/771/EC as amended. ECC Rec (05)07.
86 – 92	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
92 – 94	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION		
94 – 94.1	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) Radio astronomy 5.562 5.562A	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) Radio astronomy		
94.1 – 95	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION		
95 – 100	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE		
100 – 102	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
102 – 105	FIXED MOBILE RADIO ASTRONOMY 5.149 5.341	FIXED MOBILE RADIO ASTRONOMY		

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
105 – 109.5	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive)		
109.5 – 111.8	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
111.8 – 114.25	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive)		
114.25 – 116	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
116 – 119.98	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.341	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE		
119.98 – 120.02	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.341	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE		

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
120.02 – 122.25	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.138 5.341	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE SPACE RESEARCH (passive)	SRDs (details in Annex 5) ISM applications (122-123 GHz)	EC Decision 2006/771/EC as amended.
122.25 – 123	FIXED INTER-SATELLITE MOBILE 5.558 Amateur 5.138	FIXED INTER-SATELLITE MOBILE Amateur	SRDs (122-123 GHz) ISM applications (122-123 GHz)	EC Decision 2006/771/EC as amended.
123 – 130	FIXED-SATELLITE (s-E) MOBILE-SATELLITE (s-E) RADIONAVIGATION RADIONAVIGATION-SATELLITE Radio astronomy 5.149 5.554	FIXED-SATELLITE (s-E) MOBILE-SATELLITE (s-E) RADIONAVIGATION RADIONAVIGATION-SATELLITE Radio astronomy		
130 – 134	EARTH EXPLORATION-SATELLITE (active) 5.562E FIXED INTER-SATELLITE MOBILE 5.558 RADIO ASTRONOMY 5.149 5.562A	EARTH EXPLORATION-SATELLITE (active) FIXED INTER-SATELLITE MOBILE RADIO ASTRONOMY		
134 – 136	AMATEUR AMATEUR-SATELLITE Radio astronomy	AMATEUR AMATEUR-SATELLITE Radio astronomy	Amateur applications	
136 – 141	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.149	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite	Amateur applications	

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
141 – 148.5	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION		
148.5 – 151.5	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
151.5 – 155.5	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION		
155.5 – 158.5	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.562F 5.562G	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive)		
158.5 – 164	FIXED FIXED-SATELLITE (s-E) MOBILE MOBILE-SATELLITE (s-E)	FIXED FIXED-SATELLITE (s-E) MOBILE MOBILE-SATELLITE (s-E)		
164 – 167	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
167 – 174.5	FIXED FIXED-SATELLITE (s-E) INTER-SATELLITE MOBILE 5.558 5.149	FIXED FIXED-SATELLITE (s-E) INTER-SATELLITE MOBILE		
174.5 – 174.8	FIXED INTER-SATELLITE MOBILE 5.558	FIXED INTER-SATELLITE MOBILE		
174.8 – 182	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562H SPACE RESEARCH (passive)	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE SPACE RESEARCH (passive)		
182 – 185	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESARCH (passive)		All emissions prohibited.
185 – 190	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562H SPACE RESEARCH (passive)	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE SPACE RESEARCH (passive)		
190 – 191.8	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)		All emissions prohibited.
191.8 – 200	FIXED INTER-SATELLITE MOBILE 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.341 5.554	FIXED INTER-SATELLITE MOBILE MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE		

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
200 – 202	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341 5.563A	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
202 – 209	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341 5.563A	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
209 – 217	FIXED FIXED-SATELLITE (E-s) MOBILE RADIO ASTRONOMY 5.149 5.341	FIXED FIXED-SATELLITE (E-s) MOBILE RADIO ASTRONOMY		
217 – 226	FIXED FIXED-SATELLITE (E-s) MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341	FIXED FIXED-SATELLITE (E-s) MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive)		
226 – 231.5	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
231.5 – 232	FIXED MOBILE Radiolocation	FIXED MOBILE Radiolocation		
232 – 235	FIXED FIXED-SATELLITE (s-E) MOBILE Radiolocation	FIXED FIXED-SATELLITE (s-E) MOBILE Radiolocation		

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
235 – 238	EARTH EXPLORATION-SATELLITE (passive) FIXED-SATELLITE (s-E) SPACE RESEARCH (passive) 5.563A 5.563B	EARTH EXPLORATION-SATELLITE (passive) FIXED-SATELLITE (s-E) SPACE RESEARCH (passive)		
238 – 240	FIXED FIXED-SATELLITE (s-E) MOBILE RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE	FIXED FIXED-SATELLITE (s-E) MOBILE RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE		
240 – 241	FIXED MOBILE RADIOLOCATION	FIXED MOBILE RADIOLOCATION		
241 – 248	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.138 5.149	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite	SRDs (details in Annex 5) ISM applications (244-246 GHz) Amateur applications	EC Decision 2006/771/EC as amended.
248 – 250	AMATEUR AMATEUR-SATELLITE Radio astronomy 5.149	AMATEUR AMATEUR-SATELLITE Radio astronomy	Amateur applications	
250 – 252	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.563A	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		All emissions prohibited.
252 – 265	FIXED MOBILE MOBILE-SATELLITE (E-s) RADIO ASTRONOMY RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554	FIXED MOBILE MOBILE-SATELLITE (E-s) RADIO ASTRONOMY RADIONAVIGATION RADIONAVIGATION-SATELLITE		

Part C ~ The Radio Spectrum in GHz

10 GHz to 1 000 GHz

Frequency Band (GHz)	ITU Allocations (Relevant to Malta)	National Allocations	Major Utilisation	Notes
265 – 275	FIXED FIXED-SATELLITE (E-s) MOBILE RADIO ASTRONOMY 5.149 5.563A	FIXED FIXED-SATELLITE (E-s) MOBILE RADIO ASTRONOMY		
275 – 1000	(Not allocated) 5.565	(Not allocated)		

Annex 1

Glossary of Acronyms, terms and definitions

Annex 1 ~ Glossary of Acronyms, Terms and Definitions

Part 1 : Glossary of Acronyms

AGA	Air-Ground-Air
AIS	Universal Shipborne Automatic Identification System
Appendix 17	Appendix 17 of the Radio Regulations: Frequencies and channeling arrangements in the high-frequency bands for the maritime mobile service.
Appendix 18	Appendix 18 of the Radio Regulations: Table of transmitting frequencies in the VHF maritime mobile band
Appendix 25	Appendix 25 of the Radio Regulations: Provisions and associated frequency allotment plan for coast radiotelephone stations operating in the exclusive maritime mobile bands between 4 000 kHz and 27 500 kHz
Appendix 26	Appendix 26 of the Radio Regulations: Provisions and associated frequency allotment plan for the Aeronautical Mobile (OR) service in the bands allocated exclusively to that service between 3 025 kHz and 18 030 kHz
Appendix 27	Appendix 27 of the Radio Regulations: Frequency allotment plan for the Aeronautical Mobile (R) service and related information

Appendix 30	Appendix 30B of the Radio Regulations: Provisions for all services and associated plans and list for the broadcasting-satellite service in the frequency bands 11.7-12.2 GHz (in Region 3), 11.7-12.5 GHz (in Region 1) and 12.2-12.7 GHz (in Region 2)
Appendix 30A	Appendix 30A of the Radio Regulations: Provisions and associated plans and list for feeder links for the broadcasting-satellite service (11.7-12.5 GHz in Region 1, 12.2-12.7 GHz in Region 2 and 11.7-12.2 GHz in Region 3) in the frequency bands 14.5-14.8 GHz and 17.3-18.1 GHz in Regions 1 and 3, and 17.3-17.8 GHz in Region 2
Appendix 30B	Appendix 30B of the Radio Regulations: Provisions and associated plan for the fixed-satellite service in the frequency bands 4 500-4 800 MHz, 6 725-7 025 MHz, 10.70-10.95 GHz, 11.20-11.45 GHz and 12.75-13.25 GHz
Article 12	Article 12 of the Radio Regulations: Seasonal planning of the high frequency bands allocated to the broadcasting service between 5 900 kHz and 26 100 kHz
Article 52	Article 52 of the Radio Regulations: Special rules relating to the use of frequencies
BBDR	Broad Band Disaster Relief
BFWA	Broadband Fixed Wireless Access
BWA	Broadband Wireless Access
CB	Citizens' Band

CEPT	European Conference of Postal and Telecommunications Administrations
DECT	Digital Enhanced Cordless Telecommunications
DME	Distance Measuring Equipment
DMO	Direct Mode Operation
DSC	Digital Selective Calling
DTT	Digital Terrestrial Television
e.i.r.p.	Equivalent isotropically radiated power - the product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna (absolute or isotropic gain)
e.p.f.d.	Equivalent power flux-density
e.r.p.	Equivalent radiated power - (in a given direction) the product of the power supplied to the antenna and its <i>gain relative to a half-wave dipole</i> in a given direction
ECC	Electronic Communications Committee: A committee of CEPT responsible for radio and telecommunication matters
ECC Dec	ECC Decision
ECC Rec	ECC Recommendation
EN	Euronorm: A harmonized ETSI standard
ENG	Electronic News Gathering
EPIRB	Emergency Position-Indicating Radio Beacon

Annex 1 ~ Glossary of Acronyms, Terms and Definitions

ERC	European Radiocommunications Committee: A committee of CEPT responsible for radio matters - ERC merged into the ECC and no longer in existence	ITU	International Telecommunication Union	LEO	Low Earth Orbit
ERC Dec	ERC Decision	ITU Geneva 1975 plan	Plan for the assignment of frequencies to broadcasting stations in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1	MCA services	Mobile communication services on aircraft
ERC Rec	ERC Recommendation	ITU Geneva 1984 plan	Frequency assignment plan for FM sound broadcasting stations in Region 1 and part of Region 3 in the band 87.5-108 MHz	MCV services	Mobile communication services on board vessels
ERMES	European Radio Message System	ITU Geneva 1985 plan	Regional agreements concerning: - the planning of the maritime radionavigation service (Radiobeacons) in the European maritime area, and - the medium frequency maritime mobile and aeronautical radionavigation services (Region 1)	MHz	Megahertz (1 000 000 Hz)
E-s	Earth-to-space direction of transmission	ITU Geneva 2006 Agreement	Regional agreement concerning the planning of terrestrial broadcasting services	MIDS	Multifunctional Information Distribution System
ETSI	European Telecommunications Standards Institute	ITU RR	The Radio Regulations of the International Telecommunication Union	MSI	Maritime Service Identity
FDD	Frequency Division Duplex	ITU Stockholm 1961 plan	Plans annexed to the Regional agreement for the European Broadcasting Area concerning the use of frequencies by the broadcasting services in the VHF and UHF bands	MVDS	Microwave (or Multipoint) Video Distribution System
FM	Frequency Modulation	ITU-R	The Radiocommunication Sector of the ITU	MWS	Multimedia Wireless system
FWA	Fixed Wireless Access	JTIDS	Joint Technical Information Distribution System	NAVTEX	Navigation Text Messaging system
GHz	Gigahertz (1 000 000 000 Hz)	kHz	Kilohertz (1 000 Hz)	PAMR	Public Access Mobile Radio
GMDSS	Global Maritime Distress and Safety System			PMR	Private Mobile Radio
GSM	Global System for Mobile Communications			RACON	Radar Beacon
Hz	Hertz, the unit of frequency measurement			RFID	Radio Frequency Identification Devices
IF	Intermediate Frequency			R-LAN	Radio Local Area Network
ILS	Instrument Landing System			RTTT	Road Transport and Traffic Telematics
IMT-2000	International Mobile Telecommunications - 3 rd generation mobile systems			SAB	Services Ancillary to Broadcasting
ISM	Industrial, Scientific and Medical applications			SAP	Services Ancillary to Programming
				S-DAB	Satellite Digital Audio Broadcasting
				s-E	Space-to-Earth direction of transmission

Annex 1 ~ Glossary of Acronyms, Terms and Definitions

S-PCS	Satellite Personal Communications System
SRD	Short Range Device
SRR	Short Range Radar
s-s	Space-space direction of transmission
SSR	Secondary Surveillance Radar
T-DAB	Terrestrial Digital Audio Broadcasting
TACAN	Tactical Air Navigation System
TDD	Time Division Duplex
TETRA	Terrestrial Trunked Radio (Digital)
TRA-ECS	Terrestrial Radio Applications capable of providing Electronic Communications Services
UMTS	Universal Mobile Telecommunications Systems
UWB	Ultra-Wideband
VOR	VHF Omnidirectional Range
VSAT	Very Small Aperture Terminal
WARC	World Administrative Radio Conference
WAS	Wireless Access System
WRC	World Radiocommunication Conference

Part 2 : Glossary of Terms and Definitions

Allocation

Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned.

Aeronautical mobile (OR) ** service

An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.

Aeronautical mobile (R) * service

An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.

Aeronautical mobile service

A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.

Aeronautical mobile-satellite (OR)** service

An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.

Aeronautical mobile-satellite (R)* service

An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flights, primarily along national or international civil air routes.

** (OR): off-route.

* (R): route.

Aeronautical mobile-satellite service

A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.

Aeronautical radionavigation service

A radionavigation service intended for the benefit and for the safe operation of aircraft.

Aeronautical radionavigation-satellite service

A radionavigation-satellite service in which earth stations are located on board aircraft.

Amateur service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

Amateur-satellite service

A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service.

Broadcasting service

A radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmissions or other types of transmission.

Broadcasting-satellite service

A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public.

In the broadcasting-satellite service, the term "direct reception" shall encompass both individual reception and community reception.

Annex 1 ~ Glossary of Acronyms, Terms and Definitions

Deep space

Space at distances from the Earth equal to, or greater than, 2×10^6 km.

Earth exploration-satellite service

A radiocommunication service between earth stations and one or more space stations, which may include links between space stations, in which:

- information relating to the characteristics of the Earth and its natural phenomena, including data relating to the state of the environment, is obtained from active sensors or passive sensors on Earth satellites;
- similar information is collected from airborne or Earth-based platforms;
- such information may be distributed to earth stations within the system concerned;
- platform interrogation may be included.

This service may also include feeder links necessary for its operation.

Fixed service

A radiocommunication service between specified fixed points.

Fixed-satellite service

A radiocommunication service between earth stations at given positions, when one or more satellites are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the inter-satellite service; the fixed-satellite service may also include feeder links for other space radiocommunication services.

Harmful interference

Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with Radio Regulations.

Industrial, scientific and medical (ISM) applications (of radio frequency energy)

Operation of equipment or appliances designed to generate and use locally radio frequency energy for industrial, scientific, medical, domestic or similar purposes, excluding applications in the field of telecommunications.

Instrument landing system

A radionavigation system which provides aircraft with horizontal and vertical guidance just before and during landing and, at certain fixed points, indicates the distance to the reference point of landing.

Instrument landing system glide path

A system of vertical guidance embodied in the instrument landing system which indicates the vertical deviation of the aircraft from its optimum path of descent.

Interference

The effect of unwanted energy due to one or a combination of emissions, radiations, or inductions upon reception in a radiocommunication system, manifested by any performance degradation, misinterpretation, or loss of information which could be extracted in the absence of such unwanted energy.

Inter-satellite service

A radiocommunication service providing links between artificial satellites.

Land mobile service

A mobile service between base stations and land mobile stations, or between land mobile stations.

Land mobile-satellite service

A mobile-satellite service in which mobile earth stations are located on land.

Maritime mobile service

A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.

Maritime mobile-satellite service

A mobile-satellite service in which mobile earth stations are located on board ships; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.

Maritime radionavigation service

A radionavigation service intended for the benefit and for the safe operation of ships.

Maritime radionavigation-satellite service

A radionavigation-satellite service in which earth stations are located on board ships.

Meteorological aids service

A radiocommunication service used for meteorological, including hydrological, observations and exploration.

Meteorological-satellite service

An earth exploration-satellite service for meteorological purposes.

Mobile service

A radiocommunication service between mobile and land stations, or between mobile stations.

Mobile-satellite service

A radiocommunication service:

- between mobile earth stations and one or more space stations, or between space stations used by this service; or
- between mobile earth stations by means of one or more space stations.

This service may also include feeder links necessary for its operation.

Annex 1 ~ Glossary of Acronyms, Terms and Definitions

Port operations service

A maritime mobile service in or near a port, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the operational handling, the movement and the safety of ships and, in emergency, to the safety of persons.

Messages which are of a public correspondence nature shall be excluded from this service.

Public correspondence

Any telecommunication which the offices and stations must, by reason of their being at the disposal of the public, accept for transmission.

Radar

A radiodetermination system based on the comparison of reference signals with radio signals reflected, or retransmitted, from the position to be determined.

Radar beacon (racon)

A transmitter-receiver associated with a fixed navigational mark which, when triggered by a radar, automatically returns a distinctive signal which can appear on the display of the triggering radar, providing range, bearing and identification information.

Radio astronomy

Astronomy based on the reception of radio waves of cosmic origin.

Radio astronomy service

A service involving the use of radio astronomy.

Radio waves or Hertzian waves

Electromagnetic waves of frequencies arbitrarily lower than 3 000 GHz, propagated in space without artificial guide.

Radiocommunication service

A service involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes.

Radiodetermination

The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.

Radiodetermination service

A radiocommunication service for the purpose of radiodetermination.

Radiodetermination-satellite service

A radiocommunication service for the purpose of radiodetermination involving the use of one or more space stations.

This service may also include feeder links necessary for its own operation.

Radiolocation

Radiodetermination used for purposes other than those of radionavigation.

Radiolocation service

A radiodetermination service for the purpose of radiolocation.

Radiolocation-satellite service

A radiodetermination-satellite service used for the purpose of radiolocation.

This service may also include the feeder links necessary for its operation.

Radionavigation

Radiodetermination used for the purposes of navigation, including obstruction warning.

Radionavigation service

A radiodetermination service for the purpose of radionavigation.

Radionavigation-satellite service

A radiodetermination-satellite service used for the purpose of radionavigation.

This service may also include feeder links necessary for its operation.

Safety service

Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property.

Ship movement service

A safety service in the maritime mobile service other than a port operations service, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the movement of ships.

Messages which are of a public correspondence nature shall be excluded from this service.

Space research service

A radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes.

Space telemetry

The use of telemetry for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft.

Special service

A radiocommunication service, not otherwise defined in this Section, carried on exclusively for specific needs of general utility, and not open to public correspondence.

Standard frequency and time signal service

A radiocommunication service for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception.

Standard frequency and time signal-satellite service

A radiocommunication service using space stations on earth satellites for the same purposes as those of the standard frequency and time signal service.

This service may also include feeder links necessary for its operation.

Annex 1 ~ Glossary of Acronyms, Terms and Definitions

Telecommand

The use of telecommunication for the transmission of signals to initiate, modify or terminate functions of equipment at a distance.

Telecommunication

Any transmission, emission or reception of signs, signals, writings, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.

Telemetry

The use of telecommunication for automatically indicating or recording measurements at a distance from the measuring instrument.

Annex 2

Relevant footnotes from the ITU Radio Regulations

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

- 5.53** Administrations authorizing the use of frequencies below 9 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 9 kHz are allocated.
- 5.54** Administrations conducting scientific research using frequencies below 9 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.
- 5.56** The stations of services to which the bands 14-19.95 kHz and 20.05-70 kHz and in Region 1 also the bands 72-84 kHz and 86-90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, Bulgaria, the Russian Federation, Georgia, Kazakhstan, Mongolia, Kyrgyzstan, Slovakia, Tajikistan and Turkmenistan, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions. (WRC-07)
- 5.57** The use of the bands 14-19.95 kHz, 20.05-70 kHz and 70-90 kHz (72-84 kHz and 86-90 kHz in Region 1) by the maritime mobile service is limited to coast radiotelegraph stations (A1A and F1B only). Exceptionally, the use of class J2B or J7B emissions is authorized subject to the necessary bandwidth not exceeding that normally used for class A1A or F1B emissions in the band concerned.
- 5.60** In the bands 70-90 kHz (70-86 kHz in Region 1) and 110-130 kHz (112-130 kHz in Region 1), pulsed radionavigation systems may be used on condition that they do not cause harmful interference to other services to which these bands are allocated.
- 5.62** Administrations which operate stations in the radionavigation service in the band 90-110 kHz are urged to coordinate technical and operating characteristics in such a way as to avoid harmful interference to the services provided by these stations.
- 5.64** Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorized for stations of the fixed service in the bands allocated to this service between 90 kHz and 160 kHz (148.5 kHz in Region 1) and for stations of the maritime mobile service in the bands allocated to this service between 110 kHz and 160 kHz (148.5 kHz in Region 1). Exceptionally, class J2B or J7B emissions are also authorized in the bands between 110 kHz and 160 kHz (148.5 kHz in Region 1) for stations of the maritime mobile service.
- 5.67A** Stations in the amateur service using frequencies in the band 135.7-137.8 kHz shall not exceed a maximum radiated power of 1 W (e.i.r.p.) and shall not cause harmful interference to stations of the radionavigation service operating in countries listed in No. 5.67. (WRC-07)
- 5.73** The band 285-325 kHz (283.5-325 kHz in Region 1) in the maritime radionavigation service may be used to transmit supplementary navigational information using narrow-band techniques, on condition that no harmful interference is caused to radiobeacon stations operating in the radionavigation service. (WRC-97)
- 5.74** *Additional Allocation:* in Region 1, the frequency band 285.3-285.7 kHz is also allocated to the maritime radionavigation service (other than radiobeacons) on a primary basis.
- 5.76** The frequency 410 kHz is designated for radio direction-finding in the maritime radionavigation service. The other radionavigation services to which the band 405-415 kHz is allocated shall not cause harmful interference to radio direction-finding in the band 406.5-413.5 kHz.
- 5.79** The use of the bands 415-495 kHz and 505-526.5 kHz (505-510 kHz in Region 2) by the maritime mobile service is limited to radiotelegraphy.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.79A When establishing coast stations in the NAVTEX service on the frequencies 490 kHz, 518 kHz and 4 209.5 kHz, administrations are strongly recommended to coordinate the operating characteristics in accordance with the procedures of the International Maritime Organization (IMO) (see Resolution **339 (Rev.WRC-07)**). (WRC-07)

5.82 In the maritime mobile service, the frequency 490 kHz is to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrow-band direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles **31** and **52**. In using the band 415-495 kHz for the aeronautical radionavigation service, administrations are requested to ensure that no harmful interference is caused to the frequency 490 kHz. (WRC-07)

5.82A The use of the band 495-505 kHz is limited to radiotelegraphy. (WRC-07)

5.82B Administrations authorizing the use of frequencies in the band 495-505 kHz by services other than the maritime mobile service shall ensure that no harmful interference is caused to the maritime mobile service in this band or to the services having allocations in the adjacent bands, noting in particular the conditions of use of the frequencies 490 kHz and 518 kHz, as prescribed in Articles **31** and **52**. (WRC-07)

5.84 The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles **31** and **52**. (WRC-07)

5.90 In the band 1 605-1 705 kHz, in cases where a broadcasting station of Region 2 is concerned, the service area of the maritime mobile stations in Region 1 shall be limited to that provided by ground-wave propagation.

5.92 Some countries of Region 1 use radiodetermination systems in the bands 1 606.5-1 625 kHz, 1 635-1 800 kHz, 1 850-2 160 kHz, 2 194-2 300 kHz, 2 502-2 850 kHz and 3 500-3 800 kHz, subject to agreement obtained under No. **9.21**. The radiated mean power of these stations shall not exceed 50 W.

5.96 In Germany, Armenia, Austria, Azerbaijan, Belarus, Denmark, Estonia, the Russian Federation, Finland, Georgia, Hungary, Ireland, Iceland, Israel, Kazakhstan, Latvia, Liechtenstein, Lithuania, Malta, Moldova, Norway, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., the United Kingdom, Sweden, Switzerland, Tajikistan, Turkmenistan and Ukraine, administrations may allocate up to 200 kHz to their amateur service in the bands 1 715-1 800 kHz and 1 850-2 000 kHz. However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighboring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W. (WRC-03)

5.100 In Region 1, the authorization to use the band 1 810-1 830 kHz by the amateur service in countries situated totally or partially north of 40° N shall be given only after consultation with the countries mentioned in Nos. **5.98** and **5.99** to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. **5.98** and **5.99**.

5.103 In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1 850-2 045 kHz, 2 194-2 498 kHz, 2 502-2 625 kHz and 2 650-2 850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.

5.104 In Region 1, the use of the band 2 025-2 045 kHz by the meteorological aids service is limited to oceanographic buoy stations.

5.108 The carrier frequency 2 182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band 2 173.5-2 190.5 kHz are prescribed in Articles **31** and **52**. (WRC-07)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.109 The frequencies 2 187.5 kHz, 4 207.5 kHz, 6 312 kHz, 8 414.5 kHz, 12 577 kHz and 16 804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article **31**.

5.110 The frequencies 2 174.5 kHz, 4 177.5 kHz, 6 268 kHz, 8 376.5 kHz, 12 520 kHz and 16 695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article **31**.

5.111 The carrier frequencies 2 182 kHz, 3 023 kHz, 5 680 kHz, 8 364 kHz and the frequencies 121.5 MHz, 156.525 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles. The conditions for the use of the frequencies are prescribed in Article **31**.

The same applies to the frequencies 10 003 kHz, 14 993 kHz and 19 993 kHz, but in each of these cases emissions must be confined in a band of ± 3 kHz about the frequency. (WRC-07)

5.112 *Alternative allocation:* in Denmark, Malta, Serbia and Sri Lanka, the band 2 194-2 300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)

5.113 For the conditions for the use of the bands 2 300-2 495 kHz (2 498 kHz in Region 1), 3 200-3 400 kHz, 4 750-4 995 kHz and 5 005-5 060 kHz by the broadcasting service, see Nos. **5.16** to **5.20**, **5.21** and **23.3** to **23.10**.

5.114 *Alternative allocation:* in Denmark, Iraq, Malta, and Serbia, the band 2 502-2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)

5.115 The carrier (reference) frequencies 3 023 kHz and 5 680 kHz may also be used, in accordance with Article **31**, by stations of the maritime mobile service engaged in coordinated search and rescue operations. (WRC-07)

5.116 Administrations are urged to authorize the use of the band 3 155-3 195 kHz to provide a common worldwide channel for low power wireless hearing aids. Additional channels for these devices may be assigned by administrations in the bands between 3 155 kHz and 3 400 kHz to suit local needs.

It should be noted that frequencies in the range 3 000 kHz to 4 000 kHz are suitable for hearing aid devices which are designed to operate over short distances within the induction field.

5.117 *Alternative allocation:* In Côte d'Ivoire, Denmark, Egypt, Liberia, Malta, Serbia, Sri Lanka and Togo, the band 3 155-3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)

5.127 The use of the band 4 000-4 063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. **52.220** and Appendix **17**).

5.128 Frequencies in the bands 4 063-4 123 kHz and 4 130-4 438 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W, on condition that harmful interference is not caused to the maritime mobile service. In addition, in Afghanistan, Argentina, Armenia, Azerbaijan, Belarus, Botswana, Burkina Faso, the Central African Rep., China, the Russian Federation, Georgia, India, Kazakhstan, Mali, Niger, Kyrgyzstan, Tajikistan, Chad, Turkmenistan and Ukraine, in the bands 4 063-4 123 kHz, 4 130-4 133 kHz and 4 408-4 438 kHz, stations in the fixed service, with a mean power not exceeding 1 kW, can be operated on condition that they are situated at least 600 km from the coast and that harmful interference is not caused to the maritime mobile service. (WRC-07)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

- 5.130** The conditions for the use of the carrier frequencies 4 125 kHz and 6 215 kHz are prescribed in Articles **31** and **52**. (WRC-07)
- 5.131** The frequency 4 209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques. (WRC-97)
- 5.132** The frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz, 19 680.5 kHz, 22 376 kHz and 26 100.5 kHz are the international frequencies for the transmission of maritime safety information (MSI) (see Appendix **17**).
- 5.134** The use of the bands 5 900-5 950 kHz, 7 300-7 350 kHz, 9 400-9 500 kHz, 11 600-11 650 kHz, 12 050-12 100 kHz, 13 570-13 600 kHz, 13 800-13 870 kHz, 15 600-15 800 kHz, 17 480-17 550 kHz and 18 900-19 020 kHz by the broadcasting service is subject to the application of the procedure of Article **12**. Administrations are encouraged to use these bands to facilitate the introduction of digitally modulated emissions in accordance with the provisions of Resolution **517 (Rev.WRC-07)**. (WRC-07)
- 5.136** *Additional allocation:* frequencies in the band 5 900-5 950 kHz may be used by stations in the following services, communicating only within the boundary of the country in which they are located: fixed service (in all three Regions), land mobile service (in Region 1), mobile except aeronautical mobile (R) service (in Regions 2 and 3), on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
- 5.137** On condition that harmful interference is not caused to the maritime mobile service, the bands 6 200-6 213.5 kHz and 6 220.5-6 525 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W. At the time of notification of these frequencies, the attention of the Bureau will be drawn to the above conditions.
- 5.138** The following bands:
- | | |
|-------------------|--|
| 6 765-6 795 kHz | (centre frequency 6 780 kHz), |
| 433.05-434.79 MHz | (centre frequency 433.92 MHz) in Region 1
except in the countries mentioned in No. 5.280 , |
| 61-61.5 GHz | (centre frequency 61.25 GHz), |
| 122-123 GHz | (centre frequency 122.5 GHz), and |
| 244-246 GHz | (centre frequency 245 GHz) |
- are designated for industrial, scientific and medical (ISM) applications. The use of these frequency bands for ISM applications shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant ITU-R Recommendations.
- 5.138A** Until 29 March 2009, the band 6 765-7 000 kHz is allocated to the fixed service on a primary basis and to the land mobile service on a secondary basis. After this date, this band is allocated to the fixed and the mobile except aeronautical mobile (R) services on a primary basis. (WRC-03)
- 5.141C** In Regions 1 and 3, the band 7 100-7 200 kHz is allocated to the broadcasting service until 29 March 2009 on a primary basis. (WRC-03)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.143 *Additional allocation:* frequencies in the band 7 300-7 350 kHz may be used by stations in the fixed service and in the land mobile service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)

5.143B In Region 1, the band 7 350-7 450 kHz is allocated, until 29 March 2009, to the fixed service on a primary basis and to the land mobile service on a secondary basis. After 29 March 2009, on condition that harmful interference is not caused to the broadcasting service, frequencies in the band 7 350-7 450 kHz may be used by stations in the fixed and land mobile services communicating only within the boundary of the country in which they are located, each station using a total radiated power that shall not exceed 24 dBW. (WRC-03)

5.143E Until 29 March 2009, the band 7 450-8 100 kHz is allocated to the fixed service on a primary basis and to the land mobile service on a secondary basis. (WRC-03)

5.145 The conditions for the use of the carrier frequencies 8 291 kHz, 12 290 kHz and 16 420 kHz are prescribed in Articles 31 and 52. (WRC-07)

5.146 *Additional allocation:* frequencies in the bands 9 400-9 500 kHz, 11 600-11 650 kHz, 12 050-12 100 kHz, 15 600-15 800 kHz, 17 480-17 550 kHz and 18 900-19 020 kHz may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)

5.147 On condition that harmful interference is not caused to the broadcasting service, frequencies in the bands 9 775-9 900 kHz, 11 650-11 700 kHz and 11 975-12 050 kHz may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.149 In making assignments to stations of other services to which the bands:

13 360-13 410 kHz,	4 950-4 990 MHz,	102-109.5 GHz,
25 550-25 670 kHz,	4 990-5 000 MHz,	111.8-114.25 GHz,
37.5-38.25 MHz,	6 650-6 675.2 MHz,	128.33-128.59 GHz,
73-74.6 MHz in Regions 1 and 3,	10.6-10.68 GHz,	129.23-129.49 GHz,
150.05-153 MHz in Region 1,	14.47-14.5 GHz,	130-134 GHz,
322-328.6 MHz,	22.01-22.21 GHz,	136-148.5 GHz,
406.1-410 MHz,	22.21-22.5 GHz,	151.5-158.5 GHz,
608-614 MHz in Regions 1 and 3,	22.81-22.86 GHz,	168.59-168.93 GHz,
1 330-1 400 MHz,	23.07-23.12 GHz,	171.11-171.45 GHz,
1 610.6-1 613.8 MHz,	31.2-31.3 GHz,	172.31-172.65 GHz,
1 660-1 670 MHz,	31.5-31.8 GHz in Regions 1 and 3,	173.52-173.85 GHz,
1 718.8-1 722.2 MHz,	36.43-36.5 GHz,	195.75-196.15 GHz,
2 655-2 690 MHz,	42.5-43.5 GHz,	209-226 GHz,
3 260-3 267 MHz,	48.94-49.04 GHz,	241-250 GHz,
3 332-3 339 MHz,	76-86 GHz,	252-275 GHz
3 345.8-3 352.5 MHz,	92-94 GHz,	
4 825-4 835 MHz,	94.1-100 GHz,	

are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 4.5 and 4.6 and Article 29). (WRC-07)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

- 5.150** The following bands:
- | | |
|-------------------|---|
| 13 553-13 567 kHz | (centre frequency 13 560 kHz), |
| 26 957-27 283 kHz | (centre frequency 27 120 kHz), |
| 40.66-40.70 MHz | (centre frequency 40.68 MHz), |
| 902-928 MHz | in Region 2 (centre frequency 915 MHz), |
| 2 400-2 500 MHz | (centre frequency 2 450 MHz), |
| 5 725-5 875 MHz | (centre frequency 5 800 MHz), and |
| 24-24.25 GHz | (centre frequency 24.125 GHz) |

are also designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within these bands must accept harmful interference which may be caused by these applications. ISM equipment operating in these bands is subject to the provisions of No. **15.13**.

5.151 *Additional allocation:* frequencies in the bands 13 570-13 600 kHz and 13 800-13 870 kHz may be used by stations in the fixed service and in the mobile except aeronautical mobile (R) service, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)

5.155B The band 21 870-21 924 kHz is used by the fixed service for provision of services related to aircraft flight safety.

5.156A The use of the band 23 200-23 350 kHz by the fixed service is limited to provision of services related to aircraft flight safety.

5.157 The use of the band 23 350-24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.

5.164 *Additional allocation:* in Albania, Germany, Austria, Belgium, Bosnia and Herzegovina, Botswana, Bulgaria, Côte d'Ivoire, Denmark, Spain, Estonia, Finland, France, Gabon, Greece, Ireland, Israel, Italy, the Libyan Arab Jamahiriya, Jordan, Lebanon, Liechtenstein, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Montenegro, Nigeria, Norway, the Netherlands, Poland, Syrian Arab Republic, Romania, the United Kingdom, Serbia, Slovenia, Sweden, Switzerland, Swaziland, Chad, Togo, Tunisia and Turkey, the band 47-68 MHz, in South Africa the band 47-50 MHz, in the Czech Rep. the band 66-68 MHz, and in Latvia and Lithuania the band 48.5-56.5 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the band. (WRC-07)

5.180 The frequency 75 MHz is assigned to marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guardband to stations of other services which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons.

Every effort should be made to improve further the characteristics of airborne receivers and to limit the power of transmitting stations close to the limits 74.8 MHz and 75.2 MHz.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.197A *Additional allocation:* the band 108-117.975 MHz is also allocated on a primary basis to the aeronautical mobile (R) service, limited to systems operating in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution **413 (Rev.WRC-07)**. The use of the band 108-112 MHz by the aeronautical mobile (R) service shall be limited to systems composed of ground-based transmitters and associated receivers that provide navigational information in support of air navigation functions in accordance with recognized international aeronautical standards. (WRC-07)

5.200 In the band 117.975-137 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of the maritime mobile service may communicate on these frequencies under the conditions laid down in Article **31** for distress and safety purposes with stations of the aeronautical mobile service. (WRC-07)

5.208 The use of the band 137-138 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. (WRC-97)

5.208A In making assignments to space stations in the mobile-satellite service in the bands 137-138 MHz, 387-390 MHz and 400.15-401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05-153 MHz, 322-328.6 MHz, 406.1-410 MHz and 608-614 MHz from harmful interference from unwanted emissions. The threshold levels of interference detrimental to the radio astronomy service are shown in the relevant ITU-R Recommendation. (WRC-07)

5.208B* In the bands:

137-138 MHz,
387-390 MHz,
400.15-401 MHz,
1 452-1 492 MHz,
1 525-1 610 MHz,
1 613.8-1 626.5 MHz,
2 655-2 690 MHz,
21.4-22 GHz,

Resolution **739 (Rev.WRC-07)** applies. (WRC-07)

5.209 The use of the bands 137-138 MHz, 148-150.05 MHz, 399.9-400.05 MHz, 400.15-401 MHz, 454-456 MHz and 459-460 MHz by the mobile-satellite service is limited to non-geostationary-satellite systems. (WRC-97)

5.211 *Additional allocation:* in Germany, Saudi Arabia, Austria, Bahrain, Belgium, Denmark, the United Arab Emirates, Spain, Finland, Greece, Ireland, Israel, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Liechtenstein, Luxembourg, Mali, Malta, Montenegro, Norway, the Netherlands, Qatar, the United Kingdom, Serbia, Slovenia, Somalia, Sweden, Switzerland, Tanzania, Tunisia and Turkey, the band 138-144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis. (WRC-07)

5.214 *Additional allocation:* in Eritrea, Ethiopia, Kenya, The Former Yugoslav Republic of Macedonia, Malta, Montenegro, Serbia, Somalia, Sudan and Tanzania, the band 138-144 MHz is also allocated to the fixed service on a primary basis. (WRC-07)

* This provision was previously numbered as No. **5.347A**. It was renumbered to preserve the sequential order.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.218 *Additional allocation:* the band 148-149.9 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. **9.21**. The bandwidth of any individual transmission shall not exceed □ 25 kHz.

5.219 The use of the band 148-149.9 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148-149.9 MHz.

5.220 The use of the bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. The mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9-400.05 MHz. (WRC-97)

5.221 Stations of the mobile-satellite service in the band 148-149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Croatia, Cuba, Denmark, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Ethiopia, the Russian Federation, Finland, France, Gabon, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, Iran (Islamic Republic of), Ireland, Iceland, Israel, Italy, the Libyan Arab Jamahiriya, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Lesotho, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Montenegro, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Kyrgyzstan, Dem. People's Rep. of Korea, Slovakia, Romania, the United Kingdom, Senegal, Serbia, Sierra Leone, Singapore, Slovenia, Sri Lanka, South Africa, Sweden, Switzerland, Swaziland, Tanzania, Chad, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Zambia and Zimbabwe. (WRC-07)

5.222 Emissions of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9-400.05 MHz may also be used by receiving earth stations of the space research service.

5.223 Recognizing that the use of the band 149.9-150.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation-satellite service, administrations are urged not to authorize such use in application of No. **4.4**.

5.224A The use of the bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service (Earth-to-space) is limited to the land mobile-satellite service (Earth-to-space) until 1 January 2015. (WRC-97)

5.224B The allocation of the bands 149.9-150.05 MHz and 399.9-400.05 MHz to the radionavigation-satellite service shall be effective until 1 January 2015. (WRC-97)

5.226 The frequency 156.525 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service using digital selective calling (DSC). The conditions for the use of this frequency and the band 156.4875-156.5625 MHz are contained in Articles **31** and **52**, and in Appendix **18**.

The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service. The conditions for the use of this frequency and the band 156.7625-156.8375 MHz are contained in Article **31** and Appendix **18**.

In the bands 156-156.4875 MHz, 156.5625-156.7625 MHz, 156.8375-157.45 MHz, 160.6-160.975 MHz and 161.475-162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by the administration (see Articles **31** and **52**, and Appendix **18**).

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Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service.

However, the frequencies 156.8 MHz and 156.525 MHz and the frequency bands in which priority is given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements. (WRC-07)

5.227 *Additional allocation:* the bands 156.4875-156.5125 MHz and 156.5375-156.5625 MHz are also allocated to the fixed and land mobile services on a primary basis. The use of these bands by the fixed and land mobile services shall not cause harmful interference to nor claim protection from the maritime mobile VHF radiocommunication service. (WRC-07)

5.227A *Additional allocation:* the bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz are also allocated to the mobile-satellite service (Earth-to-space) on a secondary basis for the reception of automatic identification system (AIS) emissions from stations operating in the maritime-mobile service (see Appendix 18). (WRC-07)

5.235 *Additional allocation:* in Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Malta, Monaco, Norway, the Netherlands, the United Kingdom, Sweden and Switzerland, the band 174-223 MHz is also allocated to the land mobile service on a primary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.

5.254 The bands 235-322 MHz and 335.4-399.9 MHz may be used by the mobile-satellite service, subject to agreement obtained under No. 9.21, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table of Frequency Allocations except for the additional allocation made in footnote No. 5.256A. (WRC-03)

5.255 The bands 312-315 MHz (Earth-to-space) and 387-390 MHz (space-to-Earth) in the mobile-satellite service may also be used by non-geostationary-satellite systems. Such use is subject to coordination under No. 9.11A.

5.256 The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes. (WRC-07)

5.257 The band 267-272 MHz may be used by administrations for space telemetry in their countries on a primary basis, subject to agreement obtained under No. 9.21.

5.258 The use of the band 328.6-335.4 MHz by the aeronautical radionavigation service is limited to Instrument Landing Systems (glide path).

5.260 Recognizing that the use of the band 399.9-400.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation satellite service, administrations are urged not to authorize such use in application of No. 4.4.

5.261 Emissions shall be confined in a band of ± 25 kHz about the standard frequency 400.1 MHz.

5.263 The band 400.15-401 MHz is also allocated to the space research service in the space-to-space direction for communications with manned space vehicles. In this application, the space research service will not be regarded as a safety service.

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5.264 The use of the band 400.15-401 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. The power flux-density limit indicated in Annex 1 of Appendix 5 shall apply until such time as a competent world radiocommunication conference revises it.

5.266 The use of the band 406-406.1 MHz by the mobile-satellite service is limited to low power satellite emergency position-indicating radiobeacons (see also Article **31**). (WRC-07)

5.267 Any emission capable of causing harmful interference to the authorized uses of the band 406-406.1 MHz is prohibited.

5.268 Use of the band 410-420 MHz by the space research service is limited to communications within 5 km of an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from extra-vehicular activities shall not exceed $-153 \text{ dB(W/m}^2\text{)}$ for $0^\circ \leq \delta \leq 5^\circ$, $-153 + 0.077 (\delta - 5) \text{ dB(W/m}^2\text{)}$ for $5^\circ \leq \delta \leq 70^\circ$ and $-148 \text{ dB(W/m}^2\text{)}$ for $70^\circ \leq \delta \leq 90^\circ$, where δ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. No. **4.10** does not apply to extra-vehicular activities. In this frequency band the space research (space-to-space) service shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services. (WRC-97)

5.276 *Additional allocation:* in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Burundi, Egypt, the United Arab Emirates, Ecuador, Eritrea, Ethiopia, Greece, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Libyan Arab Jamahiriya, Jordan, Kenya, Kuwait, Lebanon, Malaysia, Malta, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Switzerland, Tanzania, Thailand, Togo, Turkey and Yemen, the band 430-440 MHz is also allocated to the fixed service on a primary basis and the bands 430-435 MHz and 438-440 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis. (WRC-07)

5.279A The use of this band by sensors in the Earth exploration-satellite service (active) shall be in accordance with Recommendation ITU-R SA.1260-1. Additionally, the Earth exploration-satellite service (active) in the band 432-438 MHz shall not cause harmful interference to the aeronautical radionavigation service in China. The provisions of this footnote in no way diminish the obligation of the Earth exploration-satellite service (active) to operate as a secondary service in accordance with Nos. **5.29** and **5.30**. (WRC-03)

5.282 In the bands 435-438 MHz, 1 260-1 270 MHz, 2 400-2 450 MHz, 3 400-3 410 MHz (in Regions 2 and 3 only) and 5 650-5 670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. **5.43**). Administrations authorizing such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. **25.11**. The use of the bands 1 260-1 270 MHz and 5 650-5 670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.

5.286 The band 449.75-450.25 MHz may be used for the space operation service (Earth-to-space) and the space research service (Earth-to-space), subject to agreement obtained under No. **9.21**.

5.286A The use of the bands 454-456 MHz and 459-460 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. (WRC-97)

5.286AA The band 450-470 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). See Resolution **224 (Rev.WRC-07)**. This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-07)

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5.287 In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. Where needed, equipment designed for 12.5 kHz channel spacing using also the additional frequencies 457.5375 MHz, 457.5625 MHz, 467.5375 MHz and 467.5625 MHz may be introduced for on-board communications. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174-2. (WRC-07)

5.289 Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460-470 MHz and 1 690-1 710 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Table.

5.296 *Additional allocation:* in Germany, Saudi Arabia, Austria, Belgium, Côte d'Ivoire, Denmark, Egypt, Spain, Finland, France, Ireland, Israel, Italy, the Libyan Arab Jamahiriya, Jordan, Lithuania, Malta, Morocco, Monaco, Norway, Oman, the Netherlands, Portugal, the Syrian Arab Republic, the United Kingdom, Sweden, Switzerland, Swaziland and Tunisia, the band 470-790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries listed in this footnote shall not cause harmful interference to existing or planned stations operating in accordance with the Table in countries other than those listed in this footnote. (WRC-07)

5.306 *Additional allocation:* in Region 1, except in the African Broadcasting Area (see Nos. **5.10** to **5.13**), and in Region 3, the band 608-614 MHz is also allocated to the radio astronomy service on a secondary basis.

5.311A For the frequency band 620-790 MHz, see also Resolution **549 (WRC-07)**. (WRC-07)

5.316 *Additional allocation:* in Germany, Saudi Arabia, Bosnia and Herzegovina, Burkina Faso, Cameroon, Côte d'Ivoire, Croatia, Denmark, Egypt, Finland, Greece, Israel, the Libyan Arab Jamahiriya, Jordan, Kenya, The Former Yugoslav Republic of Macedonia, Liechtenstein, Mali, Monaco, Montenegro, Norway, the Netherlands, Portugal, the United Kingdom, the Syrian Arab Republic, Serbia, Sweden and Switzerland, the band 790-830 MHz, and in these same countries and in Spain, France, Gabon and Malta, the band 830-862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band. This allocation is effective until 16 June 2015. (WRC-07)

5.316A *Additional allocation:* in Spain, France, Gabon and Malta, the band 790-830 MHz, in Angola, Bahrain, Benin, Botswana, Congo (Rep. of the), French overseas departments and communities of Region 1, Gambia, Ghana, Guinea, Kuwait, Lesotho, Lebanon, Malawi, Morocco, Mauritania, Mozambique, Namibia, Niger, Oman, Uganda, Poland, Qatar, Rwanda, Senegal, Sudan, South Africa, Swaziland, Tanzania, Chad, Togo, Yemen, Zambia and Zimbabwe, the band 790-862 MHz, in Georgia, the band 806-862 MHz, and in Lithuania, the band 830-862 MHz is also allocated to the mobile, except aeronautical mobile, service on a primary basis subject to the agreement by the administrations concerned obtained under No. **9.21** and under the GE06 Agreement, as appropriate, including those administrations mentioned in No. **5.312** where appropriate. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause unacceptable interference to, nor claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band. Frequency assignments to the mobile service under this allocation in Lithuania and Poland shall not be used without the agreement of the Russian Federation and Belarus. This allocation is effective until 16 June 2015. (WRC-07)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.316B In Region 1, the allocation to the mobile, except aeronautical mobile, service on a primary basis in the frequency band 790-862 MHz shall come into effect from 17 June 2015 and shall be subject to agreement obtained under No. **9.21** with respect to the aeronautical radionavigation service in countries mentioned in No. **5.312**. For countries party to the GE06 Agreement, the use of stations of the mobile service is also subject to the successful application of the procedures of that Agreement. Resolutions **224 (Rev.WRC-07)** and **749 (WRC-07)** shall apply. (WRC-07)

5.317A Those parts of the band 698-960 MHz in Region 2 and the band 790-960 MHz in Regions 1 and 3 which are allocated to the mobile service on a primary basis are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). See Resolutions **224 (Rev.WRC-07)** and **749 (WRC-07)**. This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-07)

5.327A The use of the band 960-1 164 MHz by the aeronautical mobile (R) service is limited to systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution **417 (WRC-07)**. (WRC-07)

5.328 The use of the band 960-1 215 MHz by the aeronautical radionavigation service is reserved on a worldwide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground-based facilities. (WRC-2000)

5.328A Stations in the radionavigation-satellite service in the band 1 164-1 215 MHz shall operate in accordance with the provisions of Resolution **609 (Rev.WRC-07)** and shall not claim protection from stations in the aeronautical radionavigation service in the band 960-1 215 MHz. No. **5.43A** does not apply. The provisions of No. **21.18** shall apply. (WRC-07)

5.328B The use of the bands 1 164-1 300 MHz, 1 559-1 610 MHz and 5 010-5 030 MHz by systems and networks in the radionavigation-satellite service for which complete coordination or notification information, as appropriate, is received by the Radiocommunication Bureau after 1 January 2005 is subject to the application of the provisions of Nos. **9.12**, **9.12A** and **9.13**. Resolution **610 (WRC-03)** shall also apply; however, in the case of radionavigation-satellite service (space-to-space) networks and systems, Resolution **610 (WRC-03)** shall only apply to transmitting space stations. In accordance with No. **5.329A**, for systems and networks in the radionavigation-satellite service (space-to-space) in the bands 1 215-1 300 MHz and 1 559-1 610 MHz, the provisions of Nos. **9.7**, **9.12**, **9.12A** and **9.13** shall only apply with respect to other systems and networks in the radionavigation-satellite service (space-to-space). (WRC-07)

5.329 Use of the radionavigation-satellite service in the band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to, and no protection is claimed from, the radionavigation service authorized under No. **5.331**. Furthermore, the use of the radionavigation-satellite service in the band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to the radiolocation service. No. **5.43** shall not apply in respect of the radiolocation service. Resolution **608 (WRC-03)** shall apply. (WRC-03)

5.329A Use of systems in the radionavigation-satellite service (space-to-space) operating in the bands 1 215-1 300 MHz and 1 559-1 610 MHz is not intended to provide safety service applications, and shall not impose any additional constraints on radionavigation-satellite service (space-to-Earth) systems or on other services operating in accordance with the Table of Frequency Allocations. (WRC-07)

5.332 In the band 1 215-1 260 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service, the radionavigation-satellite service and other services allocated on a primary basis. (WRC-2000)

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5.335A In the band 1 260-1 300 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service and other services allocated by footnotes on a primary basis. (WRC-2000)

5.337 The use of the bands 1 300-1 350 MHz, 2 700-2 900 MHz and 9 000-9 200 MHz by the aeronautical radionavigation service is restricted to ground-based radars and to associated airborne transponders which transmit only on frequencies in these bands and only when actuated by radars operating in the same band.

5.337A The use of the band 1 300-1 350 MHz by earth stations in the radionavigation-satellite service and by stations in the radiolocation service shall not cause harmful interference to, nor constrain the operation and development of, the aeronautical-radionavigation service. (WRC-2000)

5.338A In the bands 1 350-1 400 MHz, 1 427-1 452 MHz, 22.55-23.55 GHz, 30-31.3 GHz, 49.7-50.2 GHz, 50.4-50.9 GHz and 51.4-52.6 GHz, Resolution **750 (WRC-07)** applies. (WRC-07)

5.339 The bands 1 370-1 400 MHz, 2 640-2 655 MHz, 4 950-4 990 MHz and 15.20-15.35 GHz are also allocated to the space research (passive) and Earth exploration-satellite (passive) services on a secondary basis.

5.340 All emissions are prohibited in the following bands:

1 400-1 427 MHz,	
2 690-2 700 MHz,	except those provided for by No. 5.422 ,
10.68-10.7 GHz,	except those provided for by No. 5.483 ,
15.35-15.4 GHz,	except those provided for by No. 5.511 ,
23.6-24 GHz,	
31.3-31.5 GHz,	
31.5-31.8 GHz,	in Region 2,
48.94-49.04 GHz,	from airborne stations
50.2-50.4 GHz ² ,	
52.6-54.25 GHz,	
86-92 GHz,	
100-102 GHz,	
109.5-111.8 GHz,	
114.25-116 GHz,	
148.5-151.5 GHz,	
164-167 GHz,	

² **5.340.1** The allocation to the Earth exploration-satellite service (passive) and the space research service (passive) in the band 50.2-50.4 GHz should not impose undue constraints on the use of the adjacent bands by the primary allocated services in those bands. (WRC-97)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

182-185 GHz,
190-191.8 GHz,
200-209 GHz,
226-231.5 GHz,
250-252 GHz. (WRC-03)

5.341 In the bands 1 400-1 727 MHz, 101-120 GHz and 197-220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extraterrestrial origin.

5.345 Use of the band 1 452-1 492 MHz by the broadcasting-satellite service, and by the broadcasting service, is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)***.

5.348 The use of the band 1 518-1 525 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. In the band 1 518-1 525 MHz stations in the mobile-satellite service shall not claim protection from the stations in the fixed service. No. **5.43A** does not apply. (WRC-03)

5.348A In the band 1 518-1 525 MHz, the coordination threshold in terms of the power flux-density levels at the surface of the Earth in application of No. **9.11A** for space stations in the mobile-satellite (space-to-Earth) service, with respect to the land mobile service use for specialized mobile radios or used in conjunction with public switched telecommunication networks (PSTN) operating within the territory of Japan, shall be -150 dB(W/m²) in any 4 kHz band for all angles of arrival, instead of those given in Table 5-2 of Appendix 5. In the band 1 518-1 525 MHz stations in the mobile-satellite service shall not claim protection from stations in the mobile service in the territory of Japan. No. **5.43A** does not apply. (WRC-03)

5.351 The bands 1 525-1 544 MHz, 1 545-1 559 MHz, 1 626.5-1 645.5 MHz and 1 646.5-1 660.5 MHz shall not be used for feeder links of any service. In exceptional circumstances, however, an earth station at a specified fixed point in any of the mobile-satellite services may be authorized by an administration to communicate via space stations using these bands.

5.351A For the use of the bands 1 518-1 544 MHz, 1 545-1 559 MHz, 1 610-1 645.5 MHz, 1 646.5-1 660.5 MHz, 1 668-1 675 MHz, 1 980-2 010 MHz, 2 170-2 200 MHz, 2 483.5-2 520 MHz and 2 670-2 690 MHz by the mobile-satellite service, see Resolutions **212 (Rev.WRC-07)** and **225 (Rev.WRC-07)**. (WRC-07)

5.352A In the band 1 525-1 530 MHz, stations in the mobile-satellite service, except stations in the maritime mobile-satellite service, shall not cause harmful interference to, or claim protection from, stations of the fixed service in France and French overseas territories in Region 3, Algeria, Saudi Arabia, Egypt, Guinea, India, Israel, Italy, Jordan, Kuwait, Mali, Malta, Morocco, Mauritania, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, Tanzania, Viet Nam and Yemen notified prior to 1 April 1998. (WRC-97)

* *Note by the Secretariat:* This Resolution was revised by WRC-03.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.353A In applying the procedures of Section II of Article 9 to the mobile-satellite service in the bands 1 530-1 544 MHz and 1 626.5-1 645.5 MHz, priority shall be given to accommodating the spectrum requirements for distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS). Maritime mobile-satellite distress, urgency and safety communications shall have priority access and immediate availability over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, distress, urgency and safety communications of the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution **222 (WRC-2000)** shall apply.) (WRC-2000)

5.354 The use of the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz by the mobile-satellite services is subject to coordination under No. **9.11A**.

5.355 *Additional allocation:* in Bahrain, Bangladesh, Congo (Rep. of the), Egypt, Eritrea, Iraq, Israel, Kuwait, Lebanon, Malta, Qatar, Syrian Arab Republic, Somalia, Sudan, Chad, Togo and Yemen, the bands 1 540-1 559 MHz, 1 610-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a secondary basis. (WRC-03)

5.356 The use of the band 1 544-1 545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications (see Article **31**).

5.357 Transmissions in the band 1 545-1 555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorized when such transmissions are used to extend or supplement the satellite-to-aircraft links.

5.357A In applying the procedures of Section II of Article 9 to the mobile-satellite service in the bands 1 545-1 555 MHz and 1 646.5-1 656.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service providing transmission of messages with priority 1 to 6 in Article **44**. Aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article **44** shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile-satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article **44**. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution **222 (WRC-2000)** shall apply.) (WRC-2000)

5.362C *Additional allocation:* in Congo (Rep. of the), Egypt, Eritrea, Iraq, Israel, Jordan, Malta, Qatar, the Syrian Arab Republic, Somalia, Sudan, Chad, Togo and Yemen, the band 1 559-1 610 MHz is also allocated to the fixed service on a secondary basis until 1 January 2015, at which time this allocation shall no longer be valid. Administrations are urged to take all practicable steps to protect the radionavigation-satellite service and not authorize new frequency assignments to fixed-service systems in this band. (WRC-07)

5.364 The use of the band 1 610-1 626.5 MHz by the mobile-satellite service (Earth-to-space) and by the radiodetermination-satellite service (Earth-to-space) is subject to coordination under No. **9.11A**. A mobile earth station operating in either of the services in this band shall not produce a peak e.i.r.p. density in excess of -15 dB(W/4 kHz) in the part of the band used by systems operating in accordance with the provisions of No. **5.366** (to which No. **4.10** applies), unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, the mean e.i.r.p. density of a mobile earth station shall not exceed -3 dB(W/4 kHz). Stations of the mobile-satellite service shall not claim protection from stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. **5.366** and stations in the fixed service operating in accordance with the provisions of No. **5.359**. Administrations responsible for the coordination of mobile-satellite networks shall make all practicable efforts to ensure protection of stations operating in accordance with the provisions of No. **5.366**.

5.365 The use of the band 1 613.8-1 626.5 MHz by the mobile-satellite service (space-to-Earth) is subject to coordination under No. **9.11A**.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

- 5.366** The band 1 610-1 626.5 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite-borne facilities. Such satellite use is subject to agreement obtained under No. **9.21**.
- 5.367** *Additional allocation:* The bands 1 610-1 626.5 MHz and 5 000-5 150 MHz are also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. **9.21**.
- 5.368** With respect to the radiodetermination-satellite and mobile-satellite services the provisions of No. **4.10** do not apply in the band 1 610-1 626.5 MHz, with the exception of the aeronautical radionavigation-satellite service.
- 5.371** *Additional allocation:* in Region 1, the bands 1 610-1 626.5 MHz (Earth-to-space) and 2 483.5-2 500 MHz (space-to-Earth) are also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. **9.21**.
- 5.372** Harmful interference shall not be caused to stations of the radio astronomy service using the band 1 610.6-1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. **29.13** applies).
- 5.374** Mobile earth stations in the mobile-satellite service operating in the bands 1 631.5-1 634.5 MHz and 1 656.5-1 660 MHz shall not cause harmful interference to stations in the fixed service operating in the countries listed in No. **5.359**. (WRC-97)
- 5.375** The use of the band 1 645.5-1 646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications (see Article **31**).
- 5.376** Transmissions in the band 1 646.5-1 656.5 MHz from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorized when such transmissions are used to extend or supplement the aircraft-to-satellite links.
- 5.376A** Mobile earth stations operating in the band 1 660-1 660.5 MHz shall not cause harmful interference to stations in the radio astronomy service. (WRC-97)
- 5.379A** Administrations are urged to give all practicable protection in the band 1 660.5-1 668.4 MHz for future research in radio astronomy, particularly by eliminating air-to-ground transmissions in the meteorological aids service in the band 1 664.4-1 668.4 MHz as soon as practicable.
- 5.379B** The use of the band 1 668-1 675 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. In the band 1 668-1 668.4 MHz, Resolution **904 (WRC-07)** shall apply. (WRC-07)
- 5.379C** In order to protect the radio astronomy service in the band 1 668-1 670 MHz, the aggregate power flux-density values produced by mobile earth stations in a network of the mobile-satellite service operating in this band shall not exceed -181 dB(W/m²) in 10 MHz and -194 dB(W/m²) in any 20 kHz at any radio astronomy station recorded in the Master International Frequency Register, for more than 2% of integration periods of 2 000 s. (WRC-03)
- 5.379D** For sharing of the band 1 668.4-1 675 MHz between the mobile-satellite service and the fixed and mobile services, Resolution **744 (Rev.WRC-07)** shall apply. (WRC-07)
- 5.379E** In the band 1 668.4-1 675 MHz, stations in the mobile-satellite service shall not cause harmful interference to stations in the meteorological aids service in China, Iran (Islamic Republic of), Japan and Uzbekistan. In the band 1 668.4-1 675 MHz, administrations are urged not to implement new systems in the meteorological aids service and are encouraged to migrate existing meteorological aids service operations to other bands as soon as practicable. (WRC-03)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.380A In the band 1 670-1 675 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, existing earth stations in the meteorological-satellite service notified before 1 January 2004. Any new assignment to these earth stations in this band shall also be protected from harmful interference from stations in the mobile-satellite service. (WRC-07)

5.384A The bands, or portions of the bands, 1 710-1 885 MHz, 2 300-2 400 MHz and 2 500-2 690 MHz, are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution **223 (Rev.WRC-07)**. This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-07)

5.385 *Additional allocation:* the band 1 718.8-1 722.2 MHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. (WRC-2000)

5.388 The bands 1 885-2 025 MHz and 2 110-2 200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications-2000 (IMT-2000). Such use does not preclude the use of these bands by other services to which they are allocated. The bands should be made available for IMT-2000 in accordance with Resolution **212 (Rev.WRC-97)**. (See also Resolution **223 (WRC-2000)**.) (WRC-2000)

5.388A In Regions 1 and 3, the bands 1 885-1 980 MHz, 2 010-2 025 MHz and 2 110-2 170 MHz and, in Region 2, the bands 1 885-1 980 MHz and 2 110-2 160 MHz may be used by high altitude platform stations as base stations to provide International Mobile Telecommunications-2000 (IMT-2000), in accordance with Resolution **221 (Rev.WRC-03)**. Their use by IMT-2000 applications using high altitude platform stations as base stations does not preclude the use of these bands by any station in the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-03)

5.389A The use of the bands 1 980-2 010 MHz and 2 170-2 200 MHz by the mobile-satellite service is subject to coordination under No. **9.11A** and to the provisions of Resolution **716 (Rev.WRC-2000)**. (WRC-07)

5.391 In making assignments to the mobile service in the bands 2 025-2 110 MHz and 2 200-2 290 MHz, administrations shall not introduce high-density mobile systems, as described in Recommendation ITU-R SA.1154, and shall take that Recommendation into account for the introduction of any other type of mobile system. (WRC-97)

5.392 Administrations are urged to take all practicable measures to ensure that space-to-space transmissions between two or more non-geostationary satellites, in the space research, space operations and Earth exploration-satellite services in the bands 2 025-2 110 MHz and 2 200-2 290 MHz, shall not impose any constraints on Earth-to-space, space-to-Earth and other space-to-space transmissions of those services and in those bands between geostationary and non-geostationary satellites.

5.398 In respect of the radiodetermination-satellite service in the band 2 483.5-2 500 MHz, the provisions of No. **4.10** do not apply.

5.399 In Region 1, in countries other than those listed in No. **5.400**, harmful interference shall not be caused to, or protection shall not be claimed from, stations of the radiolocation service by stations of the radiodetermination satellite service.

5.402 The use of the band 2 483.5-2 500 MHz by the mobile-satellite and the radiodetermination-satellite services is subject to the coordination under No. **9.11A**. Administrations are urged to take all practicable steps to prevent harmful interference to the radio astronomy service from emissions in the 2 483.5-2 500 MHz band, especially those caused by second-harmonic radiation that would fall into the 4 990-5 000 MHz band allocated to the radio astronomy service worldwide.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.410 The band 2 500-2 690 MHz may be used for tropospheric scatter systems in Region 1, subject to agreement obtained under No. **9.21**. Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in this band. When planning new tropospheric scatter radio-relay links in this band, all possible measures shall be taken to avoid directing the antennas of these links towards the geostationary-satellite orbit. (WRC-07)

5.413 In the design of systems in the broadcasting-satellite service in the bands between 2 500 MHz and 2 690 MHz, administrations are urged to take all necessary steps to protect the radio astronomy service in the band 2 690-2 700 MHz.

5.416 The use of the band 2 520-2 670 MHz by the broadcasting-satellite service is limited to national and regional systems for community reception, subject to agreement obtained under No. **9.21**. The provisions of No. **9.19** shall be applied by administrations in this band in their bilateral and multilateral negotiations. (WRC-07)

5.417C Use of the band 2 605-2 630 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.417A**, for which complete Appendix 4 coordination information, or notification information, has been received after 4 July 2003, is subject to the application of the provisions of No. **9.12**. (WRC-03)

5.417D Use of the band 2 605-2 630 MHz by geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, has been received after 4 July 2003 is subject to the application of the provisions of No. **9.13** with respect to non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.417A**, and No. **22.2** does not apply. (WRC-03)

5.418B Use of the band 2 630-2 655 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.418**, for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000, is subject to the application of the provisions of No. **9.12**. (WRC-03)

5.418C Use of the band 2 630-2 655 MHz by geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000 is subject to the application of the provisions of No. **9.13** with respect to non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.418** and No. **22.2** does not apply. (WRC-03)

5.423 In the band 2 700-2 900 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the aeronautical radionavigation service.

5.424A In the band 2 900-3 100 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the radionavigation service. (WRC-03)

5.425 In the band 2 900-3 100 MHz, the use of the shipborne interrogator-transponder (SIT) system shall be confined to the sub-band 2 930 -2 950 MHz.

5.426 The use of the band 2 900-3 100 MHz by the aeronautical radionavigation service is limited to ground-based radars.

5.427 In the bands 2 900-3 100 MHz and 9 300-9 500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons (racons) and shall not cause interference to ship or aeronautical radars in the radionavigation service, having regard, however, to No. **4.9**.

5.438 Use of the band 4 200-4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the Earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.440 The standard frequency and time signal-satellite service may be authorized to use the frequency 4 202 MHz for space-to-Earth transmissions and the frequency 6 427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of ± 2 MHz of these frequencies, subject to agreement obtained under No. **9.21**.

5.441 The use of the bands 4 500-4 800 MHz (space-to-Earth), 6 725-7 025 MHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix **30B**. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix **30B**. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)

5.442 In the bands 4 825-4 835 MHz and 4 950-4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service. In Region 2 (except Brazil, Cuba, Guatemala, Paraguay, Uruguay and Venezuela), and in Australia, the band 4 825-4 835 MHz is also allocated to the aeronautical mobile service, limited to aeronautical mobile telemetry for flight testing by aircraft stations. Such use shall be in accordance with Resolution **416 (WRC-07)** and shall not cause harmful interference to the fixed service. (WRC-07)

5.443B In order not to cause harmful interference to the microwave landing system operating above 5 030 MHz, the aggregate power flux-density produced at the Earth's surface in the band 5 030-5 150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the band 5 010-5 030 MHz shall not exceed -124.5 dB(W/m²) in a 150 kHz band. In order not to cause harmful interference to the radio astronomy service in the band 4 990-5 000 MHz, radionavigation-satellite service systems operating in the band 5 010-5 030 MHz shall comply with the limits in the band 4 990-5 000 MHz defined in Resolution **741 (WRC-03)**. (WRC-03)

5.444 The band 5 030-5 150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. In the band 5 030-5 091 MHz, the requirements of this system shall take precedence over other uses of this band. For the use of the band 5 091-5 150 MHz, No. **5.444A** and Resolution **114 (Rev.WRC-03)** apply. (WRC-07)

5.444A *Additional allocation:* the band 5 091-5 150 MHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. This allocation is limited to feeder links of non-geostationary satellite systems in the mobile-satellite service and is subject to coordination under No. **9.11A**.

In the band 5 091-5 150 MHz, the following conditions also apply:

- prior to 1 January 2018, the use of the band 5 091-5 150 MHz by feeder links of non-geostationary-satellite systems in the mobile-satellite service shall be made in accordance with Resolution **114 (Rev.WRC-03)**;
- after 1 January 2016, no new assignments shall be made to earth stations providing feeder links of non-geostationary mobile-satellite systems;
- after 1 January 2018, the fixed-satellite service will become secondary to the aeronautical radionavigation service. (WRC-07)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.444B The use of the band 5 091-5 150 MHz by the aeronautical mobile service is limited to:

- systems operating in the aeronautical mobile (R) service and in accordance with international aeronautical standards, limited to surface applications at airports. Such use shall be in accordance with Resolution **748 (WRC-07)**;
- aeronautical telemetry transmissions from aircraft stations (see No. **1.83**) in accordance with Resolution **418 (WRC-07)**;
- aeronautical security transmissions. Such use shall be in accordance with Resolution **419 (WRC-07)**. (WRC-07)

5.446 *Additional allocation:* in the countries listed in Nos. **5.369** and **5.400**, the band 5 150-5 216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis, subject to agreement obtained under No. **9.21**. In Region 2, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in Nos. **5.369** and **5.400**, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the bands 1 610-1 626.5 MHz and/or 2 483.5-2 500 MHz. The total power flux-density at the Earth's surface shall in no case exceed -159 dB(W/m²) in any 4 kHz band for all angles of arrival.

5.446A The use of the bands 5 150-5 350 MHz and 5 470-5 725 MHz by the stations in the mobile, except aeronautical mobile, service shall be in accordance with Resolution **229 (WRC-03)**. (WRC-07)

5.446B In the band 5 150-5 250 MHz, stations in the mobile service shall not claim protection from earth stations in the fixed-satellite service. No. **5.43A** does not apply to the mobile service with respect to fixed-satellite service earth stations. (WRC-03)

5.446C *Additional allocation:* in Region 1 (except in Algeria, Saudi Arabia, Bahrain, Egypt, United Arab Emirates, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Syrian Arab Republic, Sudan and Tunisia) and in Brazil, the band 5 150-5 250 MHz is also allocated to the aeronautical mobile service on a primary basis, limited to aeronautical telemetry transmissions from aircraft stations (see No. **1.83**), in accordance with Resolution **418 (WRC-07)**. These stations shall not claim protection from other stations operating in accordance with Article 5. No. **5.43A** does not apply. (WRC-07)

5.447A The allocation to the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to coordination under No. **9.11A**.

5.447B *Additional allocation:* the band 5 150-5 216 MHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. This allocation is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to provisions of No. **9.11A**. The power flux-density at the Earth's surface produced by space stations of the fixed-satellite service operating in the space-to-Earth direction in the band 5 150-5 216 MHz shall in no case exceed -164 dB(W/m²) in any 4 kHz band for all angles of arrival.

5.447C Administrations responsible for fixed-satellite service networks in the band 5 150-5 250 MHz operated under Nos. **5.447A** and **5.447B** shall coordinate on an equal basis in accordance with No. **9.11A** with administrations responsible for non-geostationary-satellite networks operated under No. **5.446** and brought into use prior to 17 November 1995. Satellite networks operated under No. **5.446** brought into use after 17 November 1995 shall not claim protection from, and shall not cause harmful interference to, stations of the fixed-satellite service operated under Nos. **5.447A** and **5.447B**.

5.447D The allocation of the band 5 250-5 255 MHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis. (WRC-97)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.447F In the band 5 250-5 350 MHz, stations in the mobile service shall not claim protection from the radiolocation service, the Earth exploration-satellite service (active) and the space research service (active). These services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendations ITU-R M.1638 and ITU-R SA.1632. (WRC-03)

5.448A The Earth exploration-satellite (active) and space research (active) services in the frequency band 5 250-5 350 MHz shall not claim protection from the radiolocation service. No. **5.43A** does not apply. (WRC-03)

5.448B The Earth exploration-satellite service (active) operating in the band 5 350-5 570 MHz and space research service (active) operating in the band 5 460-5 570 MHz shall not cause harmful interference to the aeronautical radionavigation service in the band 5 350-5 460 MHz, the radionavigation service in the band 5 460-5 470 MHz and the maritime radionavigation service in the band 5 470-5 570 MHz. (WRC-03)

5.448C The space research service (active) operating in the band 5 350-5 460 MHz shall not cause harmful interference to nor claim protection from other services to which this band is allocated. (WRC-03)

5.448D In the frequency band 5 350-5 470 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the aeronautical radionavigation service operating in accordance with No. **5.449**. (WRC-03)

5.449 The use of the band 5 350-5 470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.

5.450A In the band 5 470-5 725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. Radiodetermination services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendation ITU-R M.1638. (WRC-03)

5.450B In the frequency band 5 470-5 650 MHz, stations in the radiolocation service, except ground-based radars used for meteorological purposes in the band 5 600-5 650 MHz, shall not cause harmful interference to, nor claim protection from, radar systems in the maritime radionavigation service. (WRC-03)

5.452 Between 5 600 MHz and 5 650 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the maritime radionavigation service.

5.457A In the bands 5 925-6 425 MHz and 14-14.5 GHz, earth stations located on board vessels may communicate with space stations of the fixed-satellite service. Such use shall be in accordance with Resolution **902 (WRC-03)**. (WRC-03)

5.458 In the band 6 425-7 075 MHz, passive microwave sensor measurements are carried out over the oceans. In the band 7 075-7 250 MHz, passive microwave sensor measurements are carried out. Administrations should bear in mind the needs of the Earth exploration-satellite (passive) and space research (passive) services in their future planning of the bands 6 425-7 025 MHz and 7 075-7 250 MHz.

5.458A In making assignments in the band 6 700-7 075 MHz to space stations of the fixed-satellite service, administrations are urged to take all practicable steps to protect spectral line observations of the radio astronomy service in the band 6 650-6 675.2 MHz from harmful interference from unwanted emissions.

5.458B The space-to-Earth allocation to the fixed-satellite service in the band 6 700-7 075 MHz is limited to feeder links for non-geostationary satellite systems of the mobile-satellite service and is subject to coordination under No. **9.11A**. The use of the band 6 700-7 075 MHz (space-to-Earth) by feeder links for non-geostationary satellite systems in the mobile-satellite service is not subject to No. **22.2**.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.458C Administrations making submissions in the band 7 025-7 075 MHz (Earth-to-space) for geostationary-satellite systems in the fixed-satellite service after 17 November 1995 shall consult on the basis of relevant ITU-R Recommendations with the administrations that have notified and brought into use non-geostationary-satellite systems in this frequency band before 18 November 1995 upon request of the latter administrations. This consultation shall be with a view to facilitating shared operation of both geostationary-satellite systems in the fixed-satellite service and non-geostationary-satellite systems in this band.

5.460 The use of the band 7 145-7 190 MHz by the space research service (Earth-to-space) is restricted to deep space; no emissions to deep space shall be effected in the band 7 190-7 235 MHz. Geostationary satellites in the space research service operating in the band 7 190-7 235 MHz shall not claim protection from existing and future stations of the fixed and mobile services and No. **5.43A** does not apply. (WRC-03)

5.461 *Additional allocation:* the bands 7 250-7 375 MHz (space-to-Earth) and 7 900-8 025 MHz (Earth-to-space) are also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. **9.21**.

5.461A The use of the band 7 450-7 550 MHz by the meteorological-satellite service (space-to-Earth) is limited to geostationary-satellite systems. Non-geostationary meteorological-satellite systems in this band notified before 30 November 1997 may continue to operate on a primary basis until the end of their lifetime. (WRC-97)

5.461B The use of the band 7 750-7 850 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems. (WRC-97)

5.462A In Regions 1 and 3 (except for Japan), in the band 8 025-8 400 MHz, the Earth exploration-satellite service using geostationary satellites shall not produce a power flux-density in excess of the following provisional values for angles of arrival (θ), without the consent of the affected administration:

-174 dB(W/m²) in a 4 kHz band for $0^\circ \leq \theta < 5^\circ$

-174 + 0.5 ($\theta - 5$) dB(W/m²) in a 4 kHz band for $5^\circ \leq \theta < 25^\circ$

-164 dB(W/m²) in a 4 kHz band for $25^\circ \leq \theta \leq 90^\circ$

These values are subject to study under Resolution **124 (WRC-97)***. (WRC-97)

5.463 Aircraft stations are not permitted to transmit in the band 8 025-8 400 MHz. (WRC-97)

5.465 In the space research service, the use of the band 8 400-8 450 MHz is limited to deep space.

5.469A In the band 8 550-8 650 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, or constrain the use and development of, stations of the radiolocation service. (WRC-97)

5.470 The use of the band 8 750-8 850 MHz by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a centre frequency of 8 800 MHz.

5.472 In the bands 8 850-9 000 MHz and 9 200-9 225 MHz, the maritime radionavigation service is limited to shore-based radars.

* *Note by the Secretariat:* This Resolution was revised by WRC-2000.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.474 In the band 9 200-9 500 MHz, search and rescue transponders (SART) may be used, having due regard to the appropriate ITU-R Recommendation (see also Article **31**).

5.475 The use of the band 9 300-9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9 300-9 320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. (WRC-07)

5.475A The use of the band 9 300-9 500 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 300 MHz that cannot be fully accommodated within the 9 500-9 800 MHz band. (WRC-07)

5.475B In the band 9 300-9 500 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, radars operating in the radionavigation service in conformity with the Radio Regulations. Ground-based radars used for meteorological purposes have priority over other radiolocation uses. (WRC-07)

5.476A In the band 9 300-9 800 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from, stations of the radionavigation and radiolocation services. (WRC-07)

5.478A The use of the band 9 800-9 900 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 500 MHz that cannot be fully accommodated within the 9 300-9 800 MHz band. (WRC-07)

5.478B In the band 9 800-9 900 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from stations of the fixed service to which this band is allocated on a secondary basis. (WRC-07)

5.479 The band 9 975-10 025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.

5.482 In the band 10.6-10.68 GHz, the power delivered to the antenna of stations of the fixed and mobile, except aeronautical mobile, services shall not exceed -3 dBW. This limit may be exceeded, subject to agreement obtained under No. **9.21**. However, in Algeria, Saudi Arabia, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, Egypt, United Arab Emirates, Georgia, India, Indonesia, Iran (Islamic Republic of), Iraq, Jordan, Libyan Arab Jamahiriya, Kazakhstan, Kuwait, Lebanon, Morocco, Mauritania, Moldova, Nigeria, Oman, Uzbekistan, Pakistan, Philippines, Qatar, Syrian Arab Republic, Kyrgyzstan, Singapore, Tajikistan, Tunisia, Turkmenistan and Viet Nam, this restriction on the fixed and mobile, except aeronautical mobile, service is not applicable. (WRC-07)

5.482A For sharing of the band 10.6-10.68 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile, except aeronautical mobile, services, Resolution **751 (WRC-07)** applies. (WRC-07)

5.484 In Region 1, the use of the band 10.7-11.7 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.484A The use of the bands 10.95-11.2 GHz (space-to-Earth), 11.45-11.7 GHz (space-to-Earth), 11.7-12.2 GHz (space-to-Earth) in Region 2, 12.2-12.75 GHz (space-to-Earth) in Region 3, 12.5-12.75 GHz (space-to-Earth) in Region 1, 13.75-14.5 GHz (Earth-to-space), 17.8-18.6 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 27.5-28.6 GHz (Earth-to-space), 29.5-30 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)

5.487 In the band 11.7-12.5 GHz in Regions 1 and 3, the fixed, fixed-satellite, mobile, except aeronautical mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations operating in accordance with the Regions 1 and 3 Plan in Appendix **30**. (WRC-03)

5.487A *Additional allocation:* in Region 1, the band 11.7-12.5 GHz, in Region 2, the band 12.2-12.7 GHz and, in Region 3, the band 11.7-12.2 GHz, are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis, limited to non-geostationary systems and subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the broadcasting-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-03)

5.492 Assignments to stations of the broadcasting-satellite service which are in conformity with the appropriate regional Plan or included in the Regions 1 and 3 List in Appendix **30** may also be used for transmissions in the fixed-satellite service (space-to-Earth), provided that such transmissions do not cause more interference, or require more protection from interference, than the broadcasting-satellite service transmissions operating in conformity with the Plan or the List, as appropriate. (WRC-2000)

5.497 The use of the band 13.25-13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigation aids.

5.498A The Earth exploration-satellite (active) and space research (active) services operating in the band 13.25-13.4 GHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service. (WRC-97)

5.500 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, Egypt, the United Arab Emirates, Gabon, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Madagascar, Malaysia, Mali, Malta, Morocco, Mauritania, Nigeria, Pakistan, Qatar, the Syrian Arab Republic, Singapore, Sudan, Chad and Tunisia, the band 13.4-14 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-03)

5.501A The allocation of the band 13.4-13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis. (WRC-97)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.501B In the band 13.4-13.75 GHz, the Earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, or constrain the use and development of, the radiolocation service. (WRC-97)

5.502 In the band 13.75-14 GHz, an earth station of a geostationary fixed-satellite service network shall have a minimum antenna diameter of 1.2 m and an earth station of a non-geostationary fixed-satellite service system shall have a minimum antenna diameter of 4.5 m. In addition, the e.i.r.p., averaged over one second, radiated by a station in the radiolocation or radionavigation services shall not exceed 59 dBW for elevation angles above 2° and 65 dBW at lower angles. Before an administration brings into use an earth station in a geostationary-satellite network in the fixed-satellite service in this band with an antenna size smaller than 4.5 m, it shall ensure that the power flux-density produced by this earth station does not exceed:

- $-115 \text{ dB(W/(m}^2 \cdot 10 \text{ MHz))}$ for more than 1% of the time produced at 36 m above sea level at the low water mark, as officially recognized by the coastal State;
- $-115 \text{ dB(W/(m}^2 \cdot 10 \text{ MHz))}$ for more than 1% of the time produced 3 m above ground at the border of the territory of an administration deploying or planning to deploy land mobile radars in this band, unless prior agreement has been obtained.

For earth stations within the fixed-satellite service having an antenna diameter greater than or equal to 4.5 m, the e.i.r.p. of any emission should be at least 68 dBW and should not exceed 85 dBW. (WRC-03)

5.503 In the band 13.75-14 GHz, geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 shall operate on an equal basis with stations in the fixed-satellite service; after that date, new geostationary space stations in the space research service will operate on a secondary basis. Until those geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 cease to operate in this band:

- in the band 13.77-13.78 GHz, the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in geostationary-satellite orbit shall not exceed:
 - i) $4.7D + 28 \text{ dB(W/40 kHz)}$, where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 1.2 m and less than 4.5 m;
 - ii) $49.2 + 20 \log(D/4.5) \text{ dB(W/40 kHz)}$, where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 4.5 m and less than 31.9 m;
 - iii) $66.2 \text{ dB(W/40 kHz)}$ for any fixed-satellite service earth station for antenna diameters (m) equal to or greater than 31.9 m;
 - iv) 56.2 dB(W/4 kHz) for narrow-band (less than 40 kHz of necessary bandwidth) fixed-satellite service earth station emissions from any fixed-satellite service earth station having an antenna diameter of 4.5 m or greater;
- the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in non-geostationary-satellite orbit shall not exceed 51 dBW in the 6 MHz band from 13.772 to 13.778 GHz.

Automatic power control may be used to increase the e.i.r.p. density in these frequency ranges to compensate for rain attenuation, to the extent that the power flux-density at the fixed-satellite service space station does not exceed the value resulting from use by an earth station of an e.i.r.p. meeting the above limits in clear-sky conditions. (WRC-03)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.504 The use of the band 14-14.3 GHz by the radionavigation service shall be such as to provide sufficient protection to space stations of the fixed-satellite service.

5.504A In the band 14-14.5 GHz, aircraft earth stations in the secondary aeronautical mobile-satellite service may also communicate with space stations in the fixed-satellite service. The provisions of Nos. **5.29**, **5.30** and **5.31** apply. (WRC-03)

5.504B Aircraft earth stations operating in the aeronautical mobile-satellite service in the band 14-14.5 GHz shall comply with the provisions of Annex 1, Part C of Recommendation ITU-R M.1643, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz band located on the territory of Spain, France, India, Italy, the United Kingdom and South Africa. (WRC-03)

5.504C In the band 14-14.25 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, Côte d'Ivoire, Egypt, Guinea, India, Iran (Islamic Republic of), Kuwait, Lesotho, Nigeria, Oman, the Syrian Arab Republic and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. **5.29**. (WRC-03)

5.506 The band 14-14.5 GHz may be used, within the fixed-satellite service (Earth-to-space), for feeder links for the broadcasting-satellite service, subject to coordination with other networks in the fixed-satellite service. Such use of feeder links is reserved for countries outside Europe.

5.506A In the band 14-14.5 GHz, ship earth stations with an e.i.r.p. greater than 21 dBW shall operate under the same conditions as earth stations located on board vessels, as provided in Resolution **902 (WRC-03)**. This footnote shall not apply to ship earth stations for which the complete Appendix 4 information has been received by the Bureau prior to 5 July 2003. (WRC-03)

5.506B Earth stations located on board vessels communicating with space stations in the fixed-satellite service may operate in the frequency band 14-14.5 GHz without the need for prior agreement from Cyprus, Greece and Malta, within the minimum distance given in Resolution **902 (WRC-03)** from these countries. (WRC-03)

5.508A In the band 14.25-14.3 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, China, Côte d'Ivoire, Egypt, France, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Lesotho, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. **5.29**. (WRC-03)

5.509A In the band 14.3-14.5 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, Cameroon, China, Côte d'Ivoire, Egypt, France, Gabon, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Lesotho, Morocco, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom, Sri Lanka, Tunisia and Viet Nam by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. **5.29**. (WRC-03)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.511A The band 15.43-15.63 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. Use of the band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth and Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. **9.11A**. The use of the frequency band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth) is limited to feeder links of non-geostationary systems in the mobile-satellite service for which advance publication information has been received by the Bureau prior to 2 June 2000. In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. In order to protect the radio astronomy service in the band 15.35-15.4 GHz, the aggregate power flux-density radiated in the 15.35-15.4 GHz band by all the space stations within any feeder-link of a non-geostationary system in the mobile-satellite service (space-to-Earth) operating in the 15.43-15.63 GHz band shall not exceed the level of $-156 \text{ dB(W/m}^2\text{)}$ in a 50 MHz bandwidth, into any radio astronomy observatory site for more than 2% of the time. (WRC-2000)

5.511C Stations operating in the aeronautical radionavigation service shall limit the effective e.i.r.p. in accordance with Recommendation ITU-R S.1340. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. **4.10** applies) from harmful interference from feeder-link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder-link earth station shall be in accordance with Recommendation ITU-R S.1340. (WRC-97)

5.511D Fixed-satellite service systems for which complete information for advance publication has been received by the Bureau by 21 November 1997 may operate in the bands 15.4-15.43 GHz and 15.63-15.7 GHz in the space-to-Earth direction and 15.63-15.65 GHz in the Earth-to-space direction. In the bands 15.4-15.43 GHz and 15.65-15.7 GHz, emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of $-146 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ for any angle of arrival. In the band 15.63-15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed $-146 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ for any angle of arrival, it shall coordinate under No. **9.11A** with the affected administrations. Stations in the fixed-satellite service operating in the band 15.63-15.65 GHz in the Earth-to-space direction shall not cause harmful interference to stations in the aeronautical radionavigation service (No. **4.10** applies). (WRC-97)

5.513A Spaceborne active sensors operating in the band 17.2-17.3 GHz shall not cause harmful interference to, or constrain the development of, the radiolocation and other services allocated on a primary basis. (WRC-97)

5.516 The use of the band 17.3-18.1 GHz by geostationary-satellite systems in the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. The use of the band 17.3-17.8 GHz in Region 2 by systems in the fixed-satellite service (Earth-to-space) is limited to geostationary satellites. For the use of the band 17.3-17.8 GHz in Region 2 by feeder links for the broadcasting-satellite service in the band 12.2-12.7 GHz, see Article **11**. The use of the bands 17.3-18.1 GHz (Earth-to-space) in Regions 1 and 3 and 17.8-18.1 GHz (Earth-to-space) in Region 2 by non-geostationary-satellite systems in the fixed-satellite service is subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)

5.516A In the band 17.3-17.7 GHz, earth stations of the fixed-satellite service (space-to-Earth) in Region 1 shall not claim protection from the broadcasting-satellite service feeder-link earth stations operating under Appendix **30A**, nor put any limitations or restrictions on the locations of the broadcasting-satellite service feeder-link earth stations anywhere within the service area of the feeder link. (WRC-03)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.516B The following bands are identified for use by high-density applications in the fixed-satellite service:

17.3-17.7 GHz	(space-to-Earth) in Region 1,
18.3-19.3 GHz	(space-to-Earth) in Region 2,
19.7-20.2 GHz	(space-to-Earth) in all Regions,
39.5-40 GHz	(space-to-Earth) in Region 1,
40-40.5 GHz	(space-to-Earth) in all Regions,
40.5-42 GHz	(space-to-Earth) in Region 2,
47.5-47.9 GHz	(space-to-Earth) in Region 1,
48.2-48.54 GHz	(space-to-Earth) in Region 1,
49.44-50.2 GHz	(space-to-Earth) in Region 1,
and	
27.5-27.82 GHz	(Earth-to-space) in Region 1,
28.35-28.45 GHz	(Earth-to-space) in Region 2,
28.45-28.94 GHz	(Earth-to-space) in all Regions,
28.94-29.1 GHz	(Earth-to-space) in Region 2 and 3,
29.25-29.46 GHz	(Earth-to-space) in Region 2,
29.46-30 GHz	(Earth-to-space) in all Regions,
48.2-50.2 GHz	(Earth-to-space) in Region 2.

This identification does not preclude the use of these bands by other fixed-satellite service applications or by other services to which these bands are allocated on a co-primary basis and does not establish priority in these Radio Regulations among users of the bands. Administrations should take this into account when considering regulatory provisions in relation to these bands. See Resolution **143 (WRC-03)**. (WRC-03)

5.519 *Additional allocation:* the bands 18-18.3 GHz in Region 2 and 18.1-18.4 GHz in Regions 1 and 3 are also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Their use is limited to geostationary satellites. (WRC-07)

5.520 The use of the band 18.1-18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of geostationary-satellite systems in the broadcasting-satellite service. (WRC-2000)

5.522A The emissions of the fixed service and the fixed-satellite service in the band 18.6-18.8 GHz are limited to the values given in Nos. **21.5A** and **21.16.2**, respectively. (WRC-2000)

5.522B The use of the band 18.6-18.8 GHz by the fixed-satellite service is limited to geostationary systems and systems with an orbit of apogee greater than 20 000 km. (WRC-2000)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.523A The use of the bands 18.8-19.3 GHz (space-to-Earth) and 28.6-29.1 GHz (Earth-to-space) by geostationary and non-geostationary fixed-satellite service networks is subject to the application of the provisions of No. **9.11A** and No. **22.2** does not apply. Administrations having geostationary-satellite networks under coordination prior to 18 November 1995 shall cooperate to the maximum extent possible to coordinate pursuant to No. **9.11A** with non-geostationary-satellite networks for which notification information has been received by the Bureau prior to that date, with a view to reaching results acceptable to all the parties concerned. Non-geostationary-satellite networks shall not cause unacceptable interference to geostationary fixed-satellite service networks for which complete Appendix 4 notification information is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)

5.523B The use of the band 19.3-19.6 GHz (Earth-to-space) by the fixed-satellite service is limited to feeder links for non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. **9.11A**, and No. **22.2** does not apply.

5.523C No. **22.2** shall continue to apply in the bands 19.3-19.6 GHz and 29.1-29.4 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix 4 coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)

5.523D The use of the band 19.3-19.7 GHz (space-to-Earth) by geostationary fixed-satellite service systems and by feeder links for non-geostationary-satellite systems in the mobile-satellite service is subject to the application of the provisions of No. **9.11A**, but not subject to the provisions of No. **22.2**. The use of this band for other non-geostationary fixed-satellite service systems, or for the cases indicated in Nos. **5.523C** and **5.523E**, is not subject to the provisions of No. **9.11A** and shall continue to be subject to Articles 9 (except No. **9.11A**) and 11 procedures, and to the provisions of No. **22.2**. (WRC-97)

5.523E No. **22.2** shall continue to apply in the bands 19.6-19.7 GHz and 29.4-29.5 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix 4 coordination information, or notification information, is considered as having been received by the Bureau by 21 November 1997. (WRC-97)

5.525 In order to facilitate interregional coordination between networks in the mobile-satellite and fixed-satellite services, carriers in the mobile-satellite service that are most susceptible to interference shall, to the extent practicable, be located in the higher parts of the bands 19.7-20.2 GHz and 29.5-30 GHz.

5.526 In the bands 19.7-20.2 GHz and 29.5-30 GHz in Region 2, and in the bands 20.1-20.2 GHz and 29.9-30 GHz in Regions 1 and 3, networks which are both in the fixed-satellite service and in the mobile-satellite service may include links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and point-to-multipoint communications.

5.527 In the bands 19.7-20.2 GHz and 29.5-30 GHz, the provisions of No. **4.10** do not apply with respect to the mobile-satellite service.

5.528 The allocation to the mobile-satellite service is intended for use by networks which use narrow spot-beam antennas and other advanced technology at the space stations. Administrations operating systems in the mobile-satellite service in the band 19.7-20.1 GHz in Region 2 and in the band 20.1-20.2 GHz shall take all practicable steps to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of No. **5.524**.

5.530 In Regions 1 and 3, the use of the band 21.4-22 GHz by the broadcasting-satellite service is subject to the provisions of Resolution **525 (Rev.WRC-07)**. (WRC-07)

5.532 The use of the band 22.21-22.5 GHz by the Earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed and mobile, except aeronautical mobile, services.

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.535A The use of the band 29.1-29.5 GHz (Earth-to-space) by the fixed-satellite service is limited to geostationary-satellite systems and feeder links to non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. **9.11A**, but not subject to the provisions of No. **22.2**, except as indicated in Nos. **5.523C** and **5.523E** where such use is not subject to the provisions of No. **9.11A** and shall continue to be subject to Articles **9** (except No. **9.11A**) and **11** procedures, and to the provisions of No. **22.2**. (WRC-97)

5.536 Use of the 25.25-27.5 GHz band by the inter-satellite service is limited to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.

5.536A Administrations operating earth stations in the Earth exploration-satellite service or the space research service shall not claim protection from stations in the fixed and mobile services operated by other administrations. In addition, earth stations in the Earth exploration-satellite service or in the space research service should be operated taking into account Recommendations ITU-R SA.1278 and ITU-R SA.1625, respectively. (WRC-03)

5.538 *Additional allocation:* the bands 27.500-27.501 GHz and 29.999-30.000 GHz are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of □arth) on a primary basis for jacent satellites on the geostationary-satellite orbit. (WRC-07)

5.539 The band 27.5-30 GHz may be used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.

5.540 *Additional allocation:* the band 27.501-29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up-link power control.

5.541 In the band 28.5-30 GHz, the earth exploration-satellite service is limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.

5.541A Feeder links of non-geostationary networks in the mobile-satellite service and geostationary networks in the fixed-satellite service operating in the band 29.1-29.5 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix 4 coordination information is considered as having been received by the Bureau after 17 May 1996 and until they are changed by a future competent world radiocommunication conference. Administrations submitting Appendix 4 information for coordination before this date are encouraged to utilize these techniques to the extent practicable. (WRC-2000)

5.543 The band 29.95-30 GHz may be used for space-to-space links in the Earth exploration-satellite service for telemetry, tracking, and control purposes, on a secondary basis.

5.544 In the band 31-31.3 GHz the power flux-density limits specified in Article 21, Table 21-4 shall apply to the space research service.

5.547 The bands 31.8-33.4 GHz, 37-40 GHz, 40.5-43.5 GHz, 51.4-52.6 GHz, 55.78-59 GHz and 64-66 GHz are available for high-density applications in the fixed service (see Resolution **75 (WRC-2000)**). Administrations should take this into account when considering regulatory provisions in relation to these bands. Because of the potential deployment of high-density applications in the fixed-satellite service in the bands 39.5-40 GHz and 40.5-42 GHz (see No. **5.516B**), administrations should further take into account potential constraints to high-density applications in the fixed service, as appropriate. (WRC-07)

5.547A Administrations should take practical measures to minimize the potential interference between stations in the fixed service and airborne stations in the radionavigation service in the 31.8-33.4 GHz band, taking into account the operational needs of the airborne radar systems. (WRC-2000)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.548 In designing systems for the inter-satellite service in the band 32.3-33 GHz, for the radionavigation service in the band 32-33 GHz, and for the space research service (deep space) in the band 31.8-32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation **707**). (WRC-03)

5.549 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, Gabon, Indonesia, Iran (Islamic Republic of), Iraq, Israel, the Libyan Arab Jamahiriya, Jordan, Kuwait, Lebanon, Malaysia, Mali, Malta, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Singapore, Somalia, Sudan, Sri Lanka, Togo, Tunisia and Yemen, the band 33.4-36 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-03)

5.549A In the band 35.5-36.0 GHz, the mean power flux-density at the Earth's surface, generated by any spaceborne sensor in the Earth exploration-satellite service (active) or space research service (active), for any angle greater than 0.8° from the beam centre shall not exceed $-73.3 \text{ dB(W/m}^2\text{)}$ in this band. (WRC-03)

5.550A For sharing of the band 36-37 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile services, Resolution **752 (WRC-07)** shall apply. (WRC-07)

5.551H The equivalent power flux-density (epfd) produced in the band 42.5-43.5 GHz by all space stations in any non-geostationary-satellite system in the fixed-satellite service (space-to-Earth), or in the broadcasting-satellite service operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time:

-230 dB(W/m²) in 1 GHz and -246 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and

-209 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station.

These epfd values shall be evaluated using the methodology given in Recommendation ITU-R S.1586-1 and the reference antenna pattern and the maximum gain of an antenna in the radio astronomy service given in Recommendation ITU-R RA.1631 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle θ_{min} of the radiotelescope (for which a default value of 5° should be adopted in the absence of notified information).

These values shall apply at any radio astronomy station that either:

- was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or
- was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply.

Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution **743 (WRC-03)** shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-07)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.5511 The power flux-density in the band 42.5-43.5 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth), or the broadcasting-satellite service (space-to-Earth) operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station:

-137 dB(W/m²) in 1 GHz and -153 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and

-116 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station.

These values shall apply at the site of any radio astronomy station that either:

- was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or
- was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply.

Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution **743 (WRC-03)** shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-03)

5.552 The allocation of the spectrum for the fixed-satellite service in the bands 42.5-43.5 GHz and 47.2-50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5-39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2-49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5-42.5 GHz.

5.552A The allocation to the fixed service in the bands 47.2-47.5 GHz and 47.9-48.2 GHz is designated for use by high altitude platform stations. The use of the bands 47.2-47.5 GHz and 47.9-48.2 GHz is subject to the provisions of Resolution **122 (Rev.WRC-07)**. (WRC-07)

5.553 In the bands 43.5-47 GHz and 66-71 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the space radiocommunication services to which these bands are allocated (see No. **5.43**). (WRC-2000)

5.554 In the bands 43.5-47 GHz, 66-71 GHz, 95-100 GHz, 123-130 GHz, 191.8-200 GHz and 252-265 GHz, satellite links connecting land stations at specified fixed points are also authorized when used in conjunction with the mobile-satellite service or the radionavigation-satellite service. (WRC-2000)

5.554A The use of the bands 47.5-47.9 GHz, 48.2-48.54 GHz and 49.44-50.2 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary satellites. (WRC-03)

5.555 *Additional allocation:* the band 48.94-49.04 GHz is also allocated to the radio astronomy service on a primary basis. (WRC-2000)

5.555B The power flux-density in the band 48.94-49.04 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth) operating in the bands 48.2-48.54 GHz and 49.44-50.2 GHz shall not exceed -151.8 dB(W/m²) in any 500 kHz band at the site of any radio astronomy station. (WRC-03)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.556 In the bands 51.4-54.25 GHz, 58.2-59 GHz and 64-65 GHz, radio astronomy observations may be carried out under national arrangements. (WRC-2000)

5.556A Use of the bands 54.25-56.9 GHz, 57-58.2 GHz and 59-59.3 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, shall not exceed $-147 \text{ dB(W/(m}^2 \cdot 100 \text{ MHz))}$ for all angles of arrival. (WRC-97)

5.557A In the band 55.78-56.26 GHz, in order to protect stations in the Earth exploration-satellite service (passive), the maximum power density delivered by a transmitter to the antenna of a fixed service station is limited to -26 dB(W/MHz) . (WRC-2000)

5.558 In the bands 55.78-58.2 GHz, 59-64 GHz, 66-71 GHz, 122.25-123 GHz, 130-134 GHz, 167-174.8 GHz and 191.8-200 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. **5.43**). (WRC-2000)

5.558A Use of the band 56.9-57 GHz by inter-satellite systems is limited to links between satellites in geostationary-satellite orbit and to transmissions from non-geostationary satellites in high-Earth orbit to those in low-Earth orbit. For links between satellites in the geostationary-satellite orbit, the single entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface, for all conditions and for all methods of modulation, shall not exceed $-147 \text{ dB(W/(m}^2 \cdot 100 \text{ MHz))}$ for all angles of arrival. (WRC-97)

5.559 In the band 59-64 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. **5.43**). (WRC-2000)

5.560 In the band 78-79 GHz radars located on space stations may be operated on a primary basis in the Earth exploration-satellite service and in the space research service.

5.561 In the band 74-76 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to stations of the fixed-satellite service or stations of the broadcasting-satellite service operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service. (WRC-2000)

5.561A The 81-81.5 GHz band is also allocated to the amateur and amateur-satellite services on a secondary basis. (WRC-2000)

5.562 The use of the band 94-94.1 GHz by the Earth exploration-satellite (active) and space research (active) services is limited to spaceborne cloud radars. (WRC-97)

5.562A In the bands 94-94.1 GHz and 130-134 GHz, transmissions from space stations of the Earth exploration-satellite service (active) that are directed into the main beam of a radio astronomy antenna have the potential to damage some radio astronomy receivers. Space agencies operating the transmitters and the radio astronomy stations concerned should mutually plan their operations so as to avoid such occurrences to the maximum extent possible. (WRC-2000)

5.562B In the bands 105-109.5 GHz, 111.8-114.25 GHz, 155.5-158.5 GHz and 217-226 GHz, the use of this allocation is limited to space-based radio astronomy only. (WRC-2000)

5.562C Use of the band 116-122.25 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 km to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed $-148 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ for all angles of arrival. (WRC-2000)

Annex 2 ~ Relevant Footnotes from ITU Radio Regulations

5.562E The allocation to the Earth exploration-satellite service (active) is limited to the band 133.5-134 GHz. (WRC-2000)

5.562F In the band 155.5-158.5 GHz, the allocation to the Earth exploration-satellite (passive) and space research (passive) services shall terminate on 1 January 2018. (WRC-2000)

5.562G The date of entry into force of the allocation to the fixed and mobile services in the band 155.5-158.5 GHz shall be 1 January 2018. (WRC-2000)

5.562H Use of the bands 174.8-182 GHz and 185-190 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed $-144 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ for all angles of arrival. (WRC-2000)

5.563A In the bands 200-209 GHz, 235-238 GHz, 250-252 GHz and 265-275 GHz, ground-based passive atmospheric sensing is carried out to monitor atmospheric constituents. (WRC-2000)

5.563B The band 237.9-238 GHz is also allocated to the Earth exploration-satellite service (active) and the space research service (active) for spaceborne cloud radars only. (WRC-2000)

5.565 The frequency band 275-1 000 GHz may be used by administrations for experimentation with, and development of, various active and passive services. In this band a need has been identified for the following spectral line measurements for passive services:

- radio astronomy service: 275-323 GHz, 327-371 GHz, 388-424 GHz, 426-442 GHz, 453-510 GHz, 623-711 GHz, 795-909 GHz and 926-945 GHz;
- Earth exploration-satellite service (passive) and space research service (passive): 275-277 GHz, 294-306 GHz, 316-334 GHz, 342-349 GHz, 363-365 GHz, 371-389 GHz, 416-434 GHz, 442-444 GHz, 496-506 GHz, 546-568 GHz, 624-629 GHz, 634-654 GHz, 659-661 GHz, 684-692 GHz, 730-732 GHz, 851-853 GHz and 951-956 GHz.

Future research in this largely unexplored spectral region may yield additional spectral lines and continuum bands of interest to the passive services. Administrations are urged to take all practicable steps to protect these passive services from harmful interference until the date when the allocation Table is established in the above-mentioned frequency band. (WRC-2000)

Annex 3

National Footnotes

Annex 3 ~ National Footnotes

MLT01	The entire radio frequency spectrum could also be used by equipment using ultra-wideband technology subject to the conditions set out in EC Decision 2007/131/EC, as amended by EC Decision 2009/343/EC.
MLT02	Currently spectrum allocated to broadcasting services, with the exception of public broadcasting services, is assigned to the Broadcasting Authority in accordance with Article 18 of the Broadcasting Act (Cap.350). However, spectrum for the distribution of television and radio services in accordance with the Electronic Communications (Regulation) Act (Cap. 399) is assigned to the Malta Communications Authority.
MLT03	Stations in the amateur service using the band 472-479 kHz shall not exceed a maximum equivalent isotropically radiated power (e.i.r.p.) of 1 Watt and shall not cause harmful interference to, or claim protection from, stations of the aeronautical radionavigation service.
MLT04	The rights of use of certain TV channels within this band are to be granted to providers of broadcast content services to pursue general interest objectives.
MLT05	The allocation of the band to the broadcasting service is limited to digital terrestrial television. The use of the band by analogue terrestrial television is no longer permitted.
MLT06	The bands 21.65 - 24.25 GHz and 24.25 - 26.65 GHz will cease to be available for automotive short-range radar equipment until the dates established in the Third Schedule of the General Authorisations (Radiocommunications Apparatus) Regulations (S.L.399.40).

Annex 4

List of Relevant Documentation

Annex 4 ~ List of Relevant Documentation

The documents listed below can be sourced from the relevant organizations – see Annex 6 for the addresses.

Part 1 : EC Directives

87/372/EEC

On the frequency bands to be reserved for the co-ordinated introduction of public Pan-European Cellular digital land-based mobile communications in the Community.

Amended by Council Directive 2009/114/EC.

91/287/EEC

On the frequency bands to be designated for the coordinated introduction of digital European cordless telecommunication (DECT) in the Community.

2009/114/EC

Amending Council Directive 87/372/EEC on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community.

Part 2 : EC Decisions

2004/545/EC

On the harmonisation of radio spectrum in the 79 GHz range for the use of automotive short-range radar equipment in the Community.

2005/50/EC

On the harmonisation of the 24 GHz range radio spectrum for the time-limited use by automotive short-range radar equipment in the Community.

Amended by Commission Implementing Decision 2011/485/EU.

2005/513/EC

On the harmonised use of radio spectrum in the 5 GHz frequency band for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs).

Amended by Commission Decision 2007/90/EC.

2005/928/EC

On the harmonisation of the 169.4-169.8125 MHz frequency band in the Community.

Amended by Commission Decision 2008/673/EC.

2006/771/EC

On harmonisation of the radio spectrum for use by short-range devices.

Amended by Commission Decisions 2008/432/EC, 2009/381/EC, 2010/368/EU and 2011/829/EU.

2006/804/EC

On harmonisation of the radio spectrum for radio frequency identification (RFID) devices operating in the ultra high frequency (UHF) band.

2007/90/EC

Amending Decision 2005/513/EC on the harmonised use of radio spectrum in the 5 GHz frequency band for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs).

2007/98/EC

On the harmonised use of radio spectrum in the 2GHz frequency bands for the implementation of systems providing mobile satellite services.

2007/131/EC

On allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonised manner in the Community.

Amended by Commission Decision 2009/343/EC.

2008/294/EC

On harmonised conditions of spectrum use for the operation of mobile communication services on aircraft (MCA services) within the Community.

2008/411/EC

On the harmonisation of the 3400-3800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community.

2008/432/EC

Amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices.

2008/477/EC

On the harmonisation of the 2500-2690 MHz frequency band for terrestrial systems capable of providing mobile satellite services.

2008/671/EC

On the harmonised use of radio spectrum in the 5875-5905 MHz frequency band for safety related applications of Intelligent Transport Systems (ITS).

2008/673/EC

Amending Decision 2005/928/EC on the harmonisation of the 169.4-169.8125 MHz frequency band in the Community.

2009/343/EC

Amending Decision 2007/131/EC on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonised manner in the Community.

2009/381/EC

Amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices.

2009/766/EC

On the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community.

Amended by Commission Implementing Decision 2011/251/EU.

Annex 4 ~ List of Relevant Documentation

2010/166/EU

On harmonised use of radio spectrum for mobile communication services on board vessels (MCV services) in the European Union.

2010/368/EU

Amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices.

2011/251/EU

Amending Decision 2009/766/EC on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community.

2011/485/EU

Amending Decision 2011/485/EU on the harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community.

2011/829/EU

Amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices.

Part 3 : CEPT Decisions

ERC Dec (94)01

ERC Decision of 24 October 1994 on the frequency bands to be designated for the coordinated introduction of the GSM digital pan-European communications system.

ERC Dec (94)03

ERC Decision of 24 October 1994 on the frequency band to be designated for the coordinated introduction of the Digital European Cordless Telecommunications system.

ERC Dec (95)03

ERC Decision of 1 December 1995 on the frequency bands to be designated for the introduction of DCS 1800.

ERC Dec (96)04

ERC Decision of 7 March 1996 on the frequency bands for the introduction of the Trans European Trunked Radio System (TETRA).

ERC Dec (97)02

ERC Decision of 21 March 1997 on the extended frequency bands to be used for the GSM Digital Pan-European Communication System.

ERC Dec (97)03

ERC Decision of 30 June 1997 on the Harmonised Use of Spectrum for Satellite Personal Communication Services (S-PCS) operating within the bands 1610-1626.5 MHz, 2483.5-2500 MHz, 1980-2010 MHz and 2170-2200 MHz.

ERC Dec (97)04

ERC Decision of 30 June 1997 on transitional arrangements for the Fixed Service and the Mobile-Satellite Service in the bands 1980-2010 MHz and 2170-2200 MHz in order to facilitate the harmonised introduction and development of Satellite Personal Communications Services.

ERC Dec (97)06

ERC Decision of 30 June 1997 on the harmonised frequency band to be designated for Social Alarm Systems.

ERC Dec (97)07

ERC Decision of 30 June 1997 on the frequency bands for the introduction of the Universal Mobile Telecommunications System (UMTS).

ERC Dec (98)11

ERC Decision of 23 November 1998 on the harmonised frequency band to be designated for CEPT PR 27 radio equipment and on the implementation of the technical standard for this equipment.

ERC Dec (98)25

ERC Decision of 23 November 1998 on the harmonised frequency band to be designated for PMR 446.

ERC Dec (99)06

ERC Decision of 10 March 1999 on the harmonised introduction of satellite personal communication systems operating in the bands below 1 GHz (S-PCS<1GHz).

ERC Dec (99)15

ERC Decision of 1 June 1999 on the designation of the harmonised frequency band 40.5 to 43.5 GHz for the introduction of Multimedia Wireless Systems (MWS) including Multipoint Video Distribution Systems (MVDS).

ERC Dec (99)17

ERC Decision of 1 June 1999 on the Automatic Identification and Surveillance system (AIS) channels in the maritime VHF band.

ERC Dec (99)25

ERC Decision of 29 November 1999 on the harmonised utilisation of spectrum for terrestrial Universal Mobile Telecommunications System (UMTS) operating within the bands 1900-1980 MHz, 2010-2025 MHz and 2110-2170 MHz.

ERC Dec (00)01

ERC Decision of 28 March 2000 extending ERC/DEC/(97)07 on the frequency bands for the introduction of terrestrial Universal Mobile Telecommunications System (UMTS).

ERC Dec (00)02

ERC Decision of 27 March 2000 on the use of the band 37.5-40.5 GHz by the fixed service and Earth stations of the fixed - satellite service (space to Earth).

ERC Dec (00)07

ERC Decision of 19 October 2000 on the shared use of the band 17.7-19.7 GHz by the fixed service and Earth stations of the fixed-satellite service (space-to-Earth).

Annex 4 ~ List of Relevant Documentation

ERC Dec (00)08

ERC Decision of 19 October 2000 on the use of the band 10.7-12.5 GHz by the fixed service and Earth stations of the broadcasting-satellite and fixed-satellite Service (space-to-Earth).

ERC Dec (01)01

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Non-specific Short Range Devices operating in the frequency bands 6765-6795 kHz and 13.553-13.567 MHz.

ERC Dec (01)04

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Non-specific Short Range Devices operating in the frequency bands 868.0-868.6 MHz, 868.7-869.2 MHz, 869.4-869.65 MHz, 869.7-870.0 MHz.

ERC Dec (01)05

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Non-specific Short Range Devices operating in the frequency band 2400-2483.5 MHz.

ERC Dec (01)06

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Non-specific Short Range Devices operating in the frequency band 5725-5875 MHz.

ERC Dec (01)11

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for Flying Model control operating in the frequency band 34.995-35.225 MHz.

ERC Dec (01)12

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used

for Model control operating in the frequencies 40.665, 40.675, 40.685 and 40.695 MHz.

ERC Dec (01)13

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for inductive applications operating in the frequency bands 9-59.750 kHz, 59.750-60.250 kHz, 60.250-70 kHz, 70-119 kHz, 119-135 kHz.

ERC Dec (01)14

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for inductive applications operating in the frequency bands 6765-6795 kHz, 13.553-13.567 MHz.

ERC Dec (01)15

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for inductive applications operating in the frequency band 7400-8800 kHz.

ERC Dec (01)18

ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for Wireless Audio Applications operating in the frequency band 863-865 MHz.

ERC Dec (01)19

ERC Decision of 12 March 2001 on harmonised frequency bands to be designated for the Direct Mode Operation (DMO) of the Digital Land Mobile Systems for the Emergency Services.

ERC Dec (01)20

ERC Decision of 12 March 2001 on harmonised frequency bands to be designated for Air-Ground-Air operation (AGA) of the Digital Land Mobile Systems for the Emergency Services.

ERC Dec (01)21

ERC Decision of 12 March 2001 on harmonised

frequency band to be designated for the Direct Mode Operation (DMO) of the Digital Land Mobile Systems.

ECC Dec (02)01

ECC Decision of 15 March 2002 on the frequency bands to be designated for the coordinated introduction of Road Transport and Traffic Telematic Systems.

ECC Dec (02)03

ECC Decision of 15 March 2002 on the availability of frequency bands for the introduction of Narrow Band Digital Land Mobile PMR/PAMR in the 400 MHz band.

ECC Dec (02)04

ECC Decision of 15 March 2002 on the use of the band 40.5-42.5 GHz by terrestrial (fixed service/broadcasting service) systems and uncoordinated Earth stations in the fixed satellite service and broadcasting-satellite service (space to Earth).

ECC Dec (02)07

ECC Decision of 15 November 2002 on the harmonised European use of the bands 1670-1675 MHz and 1800-1805 MHz and on the withdrawal of the ERC Decision (92)01 "Decision on the frequency bands to be designated for the coordinated introduction of the Terrestrial Flight Telecommunications System".

ECC Dec (03)02

ECC Decision of 17 October 2003 on the designation of the frequency band 1479.5-1492 MHz for use by Satellite Digital Audio Broadcasting systems.

ECC Dec (04)06

ECC Decision of 19 March 2004 on the availability of frequency bands for the introduction of Wide Band Digital Land Mobile PMR/PAMR in the 400 MHz and 800/900 MHz bands.

ECC Dec (04)09

ECC Decision of 12 November 2004 on the designation of the bands 1518-1525 MHz and 1670-1675 MHz for the Mobile-Satellite Service.

Annex 4 ~ List of Relevant Documentation

ECC Dec (05)01

ECC Decision of 18 March 2005 on the use of the band 27.5-29.5 GHz by the Fixed Service and uncoordinated Earth stations of the Fixed-Satellite Service (Earth-to-space).

ECC Dec (05)12

ECC Decision of 28 October 2005 on harmonised frequencies, technical characteristics, exemption from individual licensing and free carriage and use of digital PMR 446 applications operating in the frequency band 446.1-446.2 MHz.

ECC Dec (06)04

ECC Decision of 24 March 2006 on the harmonised conditions for devices using Ultra-Wideband (UWB) technology in the bands below 10.6 GHz.

ECC Dec (06)05

ECC Decision of 7 July 2006 on the harmonised frequency bands to be designated for Air-Ground-Air operation (AGA) of the Digital Land Mobile Systems for the Emergency Services.

ECC Dec (10)02

ECC Decision of 12 November 2010 on compatibility between the fixed satellite service in the 30-31 GHz band and the Earth exploration satellite service (passive) in the 31.3-31.5 GHz band.

ECC Dec (08)05

ECC Decision of 27 June 2008 on the harmonisation of frequency bands for the implementation of digital Public Protection and Disaster Relief (PPDR) radio applications in bands within the 380-470 MHz range.

ECC Dec (11)01

ECC Decision of 11 March 2011 on the protection of Earth exploration satellite service (passive) in the 1400-1427 MHz band.

Part 4 : CEPT Recommendations

ERC Rec T/R 32-02

Frequencies to be used by on-board communication stations.

ERC Rec T/R 25-08

Planning criteria and coordination of frequencies in the Land Mobile Service in the range 29.7-921 MHz.

ERC Rec T/R 22-07

Frequency bands, planning and coordination for systems using the DCS 1800 standards.

ERC Rec T/R 20-09

PR 27 radio equipment intended to provide short range voice radiocommunication in the 27 MHz band.

ERC Rec T/R 13-02

Preferred channel arrangements for fixed services in the range 22.0-29.5 GHz.

ERC Rec T/R 13-01

Preferred channel arrangements for fixed services in the range 1-3 GHz.

ERC Rec T/R 12-01

Harmonized radio frequency channel arrangements for analogue and digital terrestrial fixed systems operating in the band 37-39.5 GHz.

ERC Rec 12-02

Harmonised radio frequency channel arrangements for analogue and digital terrestrial fixed systems operating in the band 12.75 GHz to 13.25 GHz.

ERC Rec 12-03

Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 17.7 GHz to 19.7 GHz.

ERC Rec 12-05

Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 10.0-10.68 GHz.

ERC Rec 12-06

Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band

10.7 GHz to 11.7 GHz.

ERC Rec 12-08

Harmonised radio frequency channel arrangements and block allocations for low, medium and high capacity systems in the band 3600 MHz to 4200 MHz.

ERC Rec 12-10

Harmonised radio frequency arrangements for digital systems operating in the band 48.5 GHz-50.2 GHz.

ERC Rec 12-11

Radio frequency channel arrangement for fixed service systems operating in the band 51.4-52.6 GHz.

ERC Rec 12-12

Radio frequency channel arrangement for fixed service systems operating in the band 55.78-57.0 GHz.

ERC Rec 13-03

The use of the band 14.0 - 14.5 GHz for Very Small Aperture Terminals (VSAT) and Satellite News Gathering (SNG).

ERC Rec 14-01

Radio-frequency channel arrangements for high capacity analogue and digital radio-relay systems operating in the band 5925 MHz-6425 MHz.

ERC Rec 14-02

Radio-frequency channel arrangements for medium and high capacity analogue or high capacity digital radio-relay systems operating in the band 6425 MHz-7125 MHz.

ERC Rec 14-03

Harmonised radio frequency channel arrangements for low and medium capacity systems in the band 3400 MHz to 3600 MHz.

ERC Rec 25-10

Frequency ranges for the use of temporary terrestrial audio and video SAP/SAB links (incl. ENG/OB).

ERC Rec 70-03

Relating to the use of Short Range Devices (SRD).

Annex 4 ~ List of Relevant Documentation

ERC Rec 01-02

Preferred channel arrangement for digital fixed service systems operating in the frequency band 31.8-33.4 GHz.

ECC Rec 01-04

Recommended guidelines for the accommodation and assignment of Multimedia Wireless Systems (MWS) in the frequency band 40.5-43.5 GHz.

ECC Rec 02-02

Channel arrangements for digital fixed service systems (point-to-point and point-to-multipoint) operating in the frequency band 31-31.3 GHz.

ECC Rec 02-06

Preferred channel arrangements for digital Fixed Service Systems operating in the frequency range 7125-8500 MHz.

ERC Rec (00)05

Use of the band 24.5-26.5 GHz for fixed wireless access.

ERC Rec (01)03

Use of parts of the band 27.5-29.5 GHz for Fixed Wireless Access (FWA).

ECC Rec (08)01

Use of the band 5855-5875 MHz for Intelligent Transport Systems.

ECC Rec (08)04

The identification of frequency bands for the implementation of Broad Band Disaster Relief (BBDR) radio applications in the 5 GHz frequency range.

ECC Rec (09)01

Use of the 57-64 GHz frequency band for point-to-point Fixed Wireless Systems.

Part 4 : ITU Recommendations

ITU-R F.636-3

Radio-frequency channel arrangements for radio-relay systems operating in the 15 GHz band.

Part 5 : ETSI ENs

EN 300 220

ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW.

EN 300 328

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques.

EN 300 330

ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Short Range Devices (SRD); Technical characteristics and test methods for radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz.

EN 300 422

ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Technical characteristics and test methods for wireless microphones in the 25 MHz to 3 GHz frequency range.

EN 300 440

Radio Equipment and Systems (RES); Short Range Devices (SRDs); Technical characteristics and test methods for radio equipment to be used in the 1 GHz to 25 GHz frequency range.

EN 300 674

ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Road Transport and Traffic Telematics

(RTTT); Technical characteristics and test methods for Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band.

EN 300 718

Electromagnetic compatibility and Radio spectrum Matters (ERM); Avalanche Beacons; Transmitter-receiver systems.

EN 301 091

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices; Road Transport and Traffic Telematics (RTTT); Radar equipment operating in the 76 GHz to 77 GHz range.

EN 301 357

ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Technical characteristics and test methods for analogue cordless wideband audio devices using integral antennas operating in the CEPT recommended 863 MHz to 865 MHz frequency range.

EN 301 839

Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio equipment in the frequency range 402 MHz to 405 MHz for Ultra Low Power Active Medical Implants and Accessories.

EN 301 840

ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Digital radio microphones operating in the CEPT Harmonized band 1 785 MHz to 1 800 MHz.

EN 301 893

Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN; Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive.

EN 302 195

Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio equipment in the frequency range 9 kHz to 315 kHz for Ultra Low Power Active Medical Implants (ULP-AMI) and accessories.

Annex 4 ~ List of Relevant Documentation

EN 302 208

Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W.

EN 302 264

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices; Road Transport and Traffic Telematics (RTTT); Short Range Radar equipment operating in the 77 GHz to 81 GHz band.

EN 302 288

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices; Road Transport and Traffic Telematics (RTTT); Short range radar equipment operating in the 24 GHz range.

EN 302 291

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13,56 MHz.

EN 302 372

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Equipment for Detection and Movement; Tanks Level Probing Radar (TLPR) operating in the frequency bands 5,8 GHz, 10 GHz, 25 GHz, 61 GHz and 77 GHz.

EN 302 536

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 315 kHz to 600 kHz.

EN 302 537

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Ultra Low Power Medical Data Service Systems operating in the frequency range 401 MHz to 402 MHz and 405 MHz to 406 MHz.

EN 302 567

Broadband Radio Access Networks (BRAN); 60 GHz

Multiple-Gigabit WAS/RLAN Systems.

EN 302 686

Intelligent Transport Systems (ITS); Radiocommunications equipment operating in the 63 GHz to 64 GHz frequency band.

EN 302 858

Electromagnetic compatibility and Radio spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Short range radar equipment operating in the 24,05 GHz to 24,25 GHz frequency range for automotive application.

ES 200 674

ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT).

Annex 5

Permitted Short Range Devices (SRDs)

Annex 5 ~ Permitted Short Range Devices

Introduction

The term *Short Range Device (SRD)* is intended to cover the radio transmitters which provide either unidirectional or bi-directional communication and which have low capability of causing interference to other radio equipment. SRDs use either integral, dedicated or external antennas and all modes of modulation can be permitted subject to relevant standards.

In Malta, short-range devices may be operated within the confines of the technical parameters of the General Authorisation (Radiocommunications Apparatus) Regulations³. A list of the type of SRD applications which are permitted to operate in the various frequency bands are listed in Table 5.1 below.

The terms of use, beyond those stipulated in Table 5.1 are that:

- SRDs in general operate in shared bands and are not permitted to cause harmful interference to other radiocommunication services;
- in general, SRDs cannot claim protection from other radiocommunication services;
- due to the increasing interest in the use of SRDs for a growing number of applications it is necessary to harmonise frequencies and regulations for these devices;
- there is a need to distinguish between different applications;
- additional applications and modifications to existing applications will be effected as necessary.

Frequency Band	Type of Device	Maximum radiated power or Field strength limits	Relevant ETSI standard	Reference
9 kHz-275 GHz	Ultra-Wideband (UWB)	-	-	EC Decision 2007/131/EC as amended
9-59.75 kHz	Inductive applications	72 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
9-315 kHz	Wireless applications in healthcare (active medical implants)	30 dB μ A/m at 10m	EN 302 195	EC Decision 2006/771/EC as amended
59.75-60.25 kHz	Inductive applications	42 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
60.25-74.75 kHz	Inductive applications	72 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
74.75-75.25 kHz	Inductive applications	42 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended

³ <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=11475&l=1>

Annex 5 ~ Permitted Short Range Devices

Frequency Band	Type of Device	Maximum radiated power or Field strength limits	Relevant ETSI standard	Reference
75.25-77.25 kHz	Inductive applications	72 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
77.25-77.75 kHz	Inductive applications	42 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
77.75-90 kHz	Inductive applications	72 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
90-119 kHz	Inductive applications	42 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
119-135 kHz	Inductive applications	66 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
135-140 kHz	Inductive applications	42 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
140-148.5 kHz	Inductive applications	37.7 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
148.5 -5000 kHz	Inductive applications	-15 dB μ A/m at 10m for bandwidths up to 10 kHz -5 dB μ A/m at 10m for bandwidths larger than 10 kHz	EN 300 330	EC Decision 2006/771/EC as amended
315-600 kHz	Wireless applications in healthcare (animal implantable devices)	-5 dB μ A/m at 10m	EN 302 536	EC Decision 2006/771/EC as amended
400-600 kHz	Inductive applications for RFID only	-8 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
456.9-457.1 kHz	Avalanche victims	7 dB μ A/m at 10m	EN 300 718	ERC Rec 70-03
3155-3400 kHz	Inductive applications	13.5 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
5000-30000 kHz	Inductive applications	-20 dB μ A/m at 10m for bandwidths up to 10 kHz bandwidth -5 dB μ A/m at 10m for bandwidths larger than 10 kHz	EN 300 330	EC Decision 2006/771/EC as amended
6765-6795 kHz	Inductive applications	42 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
6765-6795 kHz	Non-specific SRDs	42 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended

Annex 5 ~ Permitted Short Range Devices

Frequency Band	Type of Device	Maximum radiated power or Field strength limits	Relevant ETSI standard	Reference
7400-8800 kHz	Inductive applications	9 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
10200-11000 kHz	Inductive applications	9 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
12500-20000 kHz	Wireless applications in health care (animal implantable devices)	-7 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
13553-13567 kHz	Inductive applications	42 dB μ A/m at 10m	EN 302 291	EC Decision 2006/771/EC as amended
13553-13567 kHz	Inductive applications for RFID and EAS only	60 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
13553-13567 kHz	Non-specific SRDs	42 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
26957-27283 kHz	Inductive applications	42 dB μ A/m at 10m	EN 300 330	EC Decision 2006/771/EC as amended
26957-27283 kHz	Non-specific SRDs	42 dB μ A/m at 10m 10 mW	EN 300 220 EN 300 330	EC Decision 2006/771/EC as amended
26995, 27045, 27095, 27145, 27195 kHz	Model control (surface)	100 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
29.7-34.90 MHz	Radio microphones	10 mW e.r.p.	EN 300 422	ERC Rec 70-03
30-37.5 MHz	Wireless applications in healthcare (active medical implants)	1 mW e.r.p.	EN 302 510	EC Decision 2006/771/EC as amended
34.995-35.225 MHz	Model control (flying)	100 mW e.r.p.	EN 300 220	ERC Rec 70-03 ERC Dec (01)11
37.5-40.98 MHz	Radio microphones	10 mW e.r.p.	EN 300 422	ERC Rec 70-03
40.66-40.7 MHz	Non-specific SRDs	10 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
40.665, 40.675, 40.685, 40.695 MHz	Model control (surface)	100 mW e.r.p.	EN 300 220	ERC Rec 70-03 ERC Dec (01)12
87.5-108 MHz	Wireless audio (low power FM transmitters)	50 nW e.r.p.	EN 301 357	EC Decision 2006/771/EC as amended
138.2-138.45 MHz	Non-specific SRDs	10 mW	EN 300 220	ERC Rec 70-03
169.4-169.475 MHz	Meter reading	500 mW e.r.p.	EN 300 220	EC Decision 2005/928/EC as amended
169.4-169.475 MHz	Tracking and asset tracing transmitters	500 mW e.r.p.	EN 300 220	EC Decision 2005/928/EC as amended

Annex 5 ~ Permitted Short Range Devices

Frequency Band	Type of Device	Maximum radiated power or Field strength limits	Relevant ETSI standard	Reference
169.4-169.475 MHz	Aids for the hearing impaired	500 mW e.r.p.	EN 300 422	EC Decision 2005/928/EC as amended
169.475-169.4875 MHz	Social alarms	10 mW e.r.p.	EN 300 220	EC Decision 2005/928/EC as amended
169.4875-169.5875 MHz	Aids for the hearing impaired	500 mW e.r.p.	EN 300 422	EC Decision 2005/928/EC as amended
169.5875-169.6 MHz	Social alarms	10 mW e.r.p.	EN 300 220	EC Decision 2005/928/EC as amended
173.965-174.015 MHz	Aids for the hearing impaired	2 mW e.r.p.	EN 300 422	ERC Rec 70-03
401-402 MHz	Wireless applications in healthcare (active medical implants and associated peripherals)	25 µW e.r.p.	EN 302 537	EC Decision 2006/771/EC as amended
402-405 MHz	Wireless applications in healthcare (active medical implants)	25 µW e.r.p.	EN 301 839	EC Decision 2006/771/EC as amended
405-406 MHz	Wireless applications in healthcare (active medical implants and associated peripherals)	25 µW e.r.p.	EN 302 537	EC Decision 2006/771/EC as amended
433.05-434.79 MHz	Non-specific SRDs	10 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
433.05-434.79 MHz	Non-specific SRDs	1 mW e.r.p. -13 dBm/10kHz power density for bandwidth modulation greater than 250 kHz	EN 300 220	EC Decision 2006/771/EC as amended
434.04-434.79 MHz	Non-specific SRDs	10 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
854-862 MHz	Radio microphones	50 mW e.r.p.	EN 300 422	ERC Rec 70-03
863-865 MHz	Radio microphones	10 mW e.r.p.	EN 300 422 EN 301 357	ERC Rec 70-03
863-865 MHz	Wireless audio	10 mW e.r.p.	EN 301 357	EC Decision 2006/771/EC as amended
863-868.6 MHz	Non-specific SRDs	25 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
868.6-870 MHz	Non-specific SRDs	25 mW e.r.p.	EN 300 220	ERC Rec 70-03
868.7-869.2 MHz	Non-specific SRDs	25 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended

Annex 5 ~ Permitted Short Range Devices

Frequency Band	Type of Device	Maximum radiated power or Field strength limits	Relevant ETSI standard	Reference
869.4-869.65 MHz	Non-specific SRDs	25 mW e.r.p. 500 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
869.7-870 MHz	Non-specific SRDs	5 mW e.r.p. 25 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
864.8-865 MHz	Wireless audio	10 mW e.r.p.	EN 300 220	ERC Rec 70-03
865-865.6 MHz	RFIDs	100 mW e.r.p.	EN 302 208	EC Decision 2006/804/EC
865.6-867.6 MHz	RFIDs	2 W e.r.p.	EN 302 208	EC Decision 2006/804/EC
867.6-868 MHz	RFIDs	500 mW e.r.p.	EN 302 208	EC Decision 2006/804/EC
868.6-868.7 MHz	Alarms	10 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
869.2-869.25 MHz	Social alarms	10 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
869.25-869.3 MHz	Alarms	10 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
869.3-869.4 MHz	Alarms	10 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
869.65-869.7 MHz	Alarms	25 mW e.r.p.	EN 300 220	EC Decision 2006/771/EC as amended
1785-1800 MHz	Radio microphones	20 mW e.r.p. 50 mW e.r.p. (only for body worn microphones)	EN 301 840	ERC Rec 70-03
1795-1800 MHz	Wireless audio	20 mW e.i.r.p.	EN 301 357	ERC Rec 70-03
2400-2483.5 MHz	Non-specific SRDs	10 mW e.i.r.p.	EN 300 440	EC Decision 2006/771/EC as amended
2400-2483.5 MHz	WAS/R-LANs	100 mW e.i.r.p.	EN 300 328	EC Decision 2006/771/EC as amended
2400-2483.5 MHz	Radiodetermination	25 mW e.i.r.p.	EN 300 440	EC Decision 2006/771/EC as amended
2446-2454 MHz	RFIDs	500 mW e.i.r.p. 4 W e.i.r.p. (restricted to use inside the boundaries of a building)	EN 300 440	EC Decision 2006/771/EC as amended ERC Rec 70-03
4500-7000 MHz	TLPR	24 dBm e.i.r.p.	EN 302 372	EC Decision 2006/771/EC as amended
5150-5350 MHz	WAS/R-LANs	200 mW maximum mean e.i.r.p. (indoor use only)	EN 301 893	EC Decision 2005/513/EC as amended
5470-5725 MHz	WAS/R-LANs	1 W maximum mean e.i.r.p.	EN 301 893	EC Decision 2005/513/EC as amended

Annex 5 ~ Permitted Short Range Devices

Frequency Band	Type of Device	Maximum radiated power or Field strength limits	Relevant ETSI standard	Reference
5725-5875 MHz	Non-specific SRDs	25 mW e.i.r.p.	EN 300 440	EC Decision 2006/771/EC as amended
5795-5805 MHz	RTTT	2 W e.i.r.p.	EN 300 674 ES 200 674	ERC Rec 70-03 ECC Dec (02)01
5805-5815 MHz	RTTT	2 W e.i.r.p.	EN 300 674 ES 200 674	ERC Rec 70-03 ECC Dec (02)01
8500-10600 MHz	TLPR	30 dBm e.i.r.p.	EN 302 372	EC Decision 2006/771/EC as amended
9200-9500 MHz	Radiodetermination	25 mW e.i.r.p.	EN 300 440	ERC Rec 70-03
9500-9975 MHz	Radiodetermination	25 mW e.i.r.p.	EN 300 440	ERC Rec 70-03
10.5-10.6 GHz	Radiodetermination	500 mW e.i.r.p.	EN 300 440	ERC Rec 70-03
13.4-14 GHz	Radiodetermination	25 mW e.i.r.p.	EN 300 440	ERC Rec 70-03
17.1-17.3 GHz	Radiodetermination	26 dBm e.i.r.p.	EN 300 440	EC Decision 2006/771/EC as amended
17.1-17.3 GHz	WAS/R-LANs	100 mW e.i.r.p.	-	ERC Rec 70-03
21.65-26.65 GHz	SRR	-	EN 302 288	EC Decision 2005/50/EC as amended
24-24.15 GHz	Non-specific SRDs	100 mW e.i.r.p.	EN 300 440	ERC Rec 70-03
24.05-24.25 GHz	Radiodetermination	100 mW e.i.r.p.	EN 300 440	ERC Rec 70-03
24.05-27.0 GHz	TLPR	43 dBm e.i.r.p.	EN 302 372	EC Decision 2006/771/EC as amended
24.05-24.075 GHz	RTTT	100 mW e.i.r.p.	EN 302 858	EC Decision 2006/771/EC as amended
24.075-24.15 GHz	RTTT	0.1 mW e.i.r.p. 100 mW e.i.r.p.	EN 302 858	EC Decision 2006/771/EC as amended
24.15-24.25 GHz	RTTT	100 mW e.i.r.p.	EN 302 858	EC Decision 2006/771/EC as amended
24.15-24.25 GHz	Non-specific SRDs	100 mW e.i.r.p.	EN 300 440	EC Decision 2006/771/EC as amended
57-64 GHz	TLPR	43 dBm e.i.r.p.	EN 302 372	EC Decision 2006/771/EC as amended
57-66 GHz	WAS	40 dBm mean e.i.r.p. (fixed outdoor installations are excluded)	EN 302 567	EC Decision 2006/771/EC as amended
61-61.5 GHz	Non-specific SRDs	100 mW e.i.r.p.	-	EC Decision 2006/771/EC as amended
63-64 GHz	RTTT	40 dBm e.i.r.p.	EN 302 686	EC Decision 2006/771/EC as amended

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Frequency Band	Type of Device	Maximum radiated power or Field strength limits	Relevant ETSI standard	Reference
75-85 GHz	TLPR	43 dBm e.i.r.p.	EN 302 372	EC Decision 2006/771/EC as amended
76-77 GHz	RTTT	55 dBm peak e.i.r.p. 50 dBm mean e.i.r.p. and 23.5 dBm mean e.i.r.p. for pulsed radar	EN 301 091	EC Decision 2006/771/EC as amended
77-81 GHz	SRR	-	EN 302 264	EC Decision 2004/545/EC
122-123 GHz	Non-specific SRDs	100 mW e.i.r.p.	-	EC Decision 2006/771/EC as amended
244-246 GHz	Non-specific SRDs	100 mW e.i.r.p.	-	EC Decision 2006/771/EC as amended

Table 5.1 : Permitted Short Range Devices in Malta

Annex 6

Sources of Further Information

Annex 6 ~ Sources of Further Information

The International Telecommunication Union (ITU)

The ITU is responsible for the publication of the Radio Regulations, which include the International Table of Frequency Allocations (Article 5). The Radio Regulations incorporate the decisions of the World Radiocommunication Conferences, including all Appendices, Resolutions, Recommendations and ITU-R Recommendations incorporated by reference.

Publications of the International Telecommunication Union can be obtained from:

Sales Office
International Telecommunication Union
Place des Nations
CH-1211 Geneva 20
Switzerland

Tel: +41 22 730 61 41
Fax: +41 22 730 51 94
Email: sales@itu.int
Web: <http://www.itu.int/publications>

The European Conference of Postal and Telecommunications Administrations (CEPT)

CEPT documentation, including all deliverables (decisions, recommendations, reports) of the CEPT can be obtained from the:

European Communications Office
Peblingehus
Nansensgade 19
DK-1366 Copenhagen
Denmark

Tel: +45 33 89 63 00
Fax: +45 33 89 63 30
Email: eco@eco.cept.org
Web: <http://www.cept.org/ecc/deliverables>

The European Telecommunications Standards Institute (ETSI)

All ETSI publications can be obtained from:

European Telecommunications Standards Institute
650, route des Lucioles
F-06921 Sophia-Antipolis
Cedex
France

Tel: +33 (0)4 92 94 49 00
Fax: +33 (0)4 93 65 47 16
Email: helpdesk@etsi.org
Web: <http://www.etsi.org>

The Malta Communications Authority (MCA)

General queries regarding radio frequency spectrum management, including this table of frequency allocations, can be directed to:

Malta Communications Authority
Valletta Waterfront
Pinto Wharf
Floriana FRN 1913
Malta

Tel: +356 21 33 68 40
Fax: +356 21 33 68 46
Email: info@mca.org.mt
Web: <http://www.mca.org.mt>